

General Matthew B. Ridgway: A Commander's Maturation of Operational Art

**A Monograph
by
MAJ Joseph R. Kurz
U.S. Army**



**School of Advanced Military Studies
United States Army Command and General Staff College
Fort Leavenworth, Kansas**

AY 2011-01

REPORT DOCUMENTATION PAGE			Form Approved OMB No. 0704-0188	
Public reporting burden for this collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing this collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden to Department of Defense, Washington Headquarters Services, Directorate for Information Operations and Reports (0704-0188), 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number. PLEASE DO NOT RETURN YOUR FORM TO THE ABOVE ADDRESS.				
1. REPORT DATE (DD-MM-YYYY) 12-05-2011		2. REPORT TYPE SAMS Monograph		3. DATES COVERED (From - To) June 2010 – May 2011
4. TITLE AND SUBTITLE General Matthew B. Ridgway: A Commander's Maturation of Operational Art		5a. CONTRACT NUMBER		
		5b. GRANT NUMBER		
		5c. PROGRAM ELEMENT NUMBER		
6. AUTHOR(S) Kurz, Joseph R., Major, U.S. Army		5d. PROJECT NUMBER		
		5e. TASK NUMBER		
		5f. WORK UNIT NUMBER		
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) School of Advanced Military Studies (SAMS) 250 Gibbon Avenue Fort Leavenworth, KS 66027-2134		8. PERFORMING ORGANIZATION REPORT NUMBER		
9. SPONSORING / MONITORING AGENCY NAME(S) AND ADDRESS(ES) Command and General Staff College 731 McClellan Avenue Fort Leavenworth, KS 66027-1350		10. SPONSOR/MONITOR'S ACRONYM(S) CGSC		
		11. SPONSOR/MONITOR'S REPORT NUMBER(S)		
12. DISTRIBUTION / AVAILABILITY STATEMENT Approved for Public Release; Distribution Unlimited				
13. SUPPLEMENTARY NOTES				
14. ABSTRACT General Ridgway's astonishing ability to visualize military campaigns matured based on his leader development, the lessons that he learned from failure and from personally mastering operational art. During WWII, Ridgway commanded the 82nd Airborne Division in Operations HUSKY and NEPTUNE, and then the XVIII Airborne Corps in Operation MARKET, the "Battle of the Bulge" and Operation VARSITY. This monograph, through an investigation into primary sources: field orders, after action reports, and personal accounts reinforced with secondary source analysis, demonstrates that Ridgway overcame inadequacy. Although he completed all the military education available, it was only after the intense crucible of three combat operations that he eventually applied operational art successfully. Ridgway achieved tactical success but did not adequately apply operational art for HUSKY, NEPTUNE and MARKET. Ridgway learned from his failures and progressively improved his application of operational art during the Bulge and VARSITY. Not until his fifth experience, did he master operational art. Within U.S. Army Mission Command, the most important subcomponent of visualization depends on eleven elements of operational art. These elements are the template this monograph uses in considering the factors of Ridgway's maturation of operational art.				
15. SUBJECT TERMS Matthew B. Ridgway, Elements Of Operational Art: Endstate and Conditions; Centers of Gravity; Direct or Indirect Approach; Decisive Points; Lines of Operation or Effort; Operational Reach; Tempo; Simultaneity and Depth; Phasing and Transitions; Culmination; Risk				
16. SECURITY CLASSIFICATION OF: (U)		17. LIMITATION OF ABSTRACT (U)	18. NUMBER OF PAGES (U) 51	19a. NAME OF RESPONSIBLE PERSON Wayne W. Grigsby Jr. COL, U.S. Army
a. REPORT (U)	b. ABSTRACT (U)			c. THIS PAGE (U)

SCHOOL OF ADVANCED MILITARY STUDIES

MONOGRAPH APPROVAL

Major Joseph R. Kurz

Title of Monograph: General Matthew B. Ridgway: A Commander's Maturation of Operational Art

Approved by:

Stephen A. Bourque, Ph.D.

Monograph Director

Russell M. Livingston, COL, LG

Second Reader

Dean A. Nowowiejski, Ph.D., COL, AR (Ret)

Third Reader

Wayne W. Grigsby, Jr., COL, IN

Director,
School of Advanced
Military Studies

Robert F. Baumann, Ph.D.

Director,
Graduate Degree
Programs

Disclaimer: Opinions, conclusions, and recommendations expressed or implied within are solely those of the author, and do not represent the views of the US Army School of Advanced Military Studies, the US Army Command and General Staff College, the United States Army, the Department of Defense, or any other US government agency. Cleared for public release: distribution unlimited.

Abstract

General Matthew B. Ridgway: A Commander's Maturation of Operational Art by MAJ Joseph R. Kurz, U.S. Army, 59 pages.

General Matthew B. Ridgway's astonishing ability to visualize a military campaign matured based on his leader development, the lessons that he learned from failure and from personally mastering operational art. During World War II, Ridgway commanded the 82nd Airborne Division in Operations HUSKY and NEPTUNE, and then the XVIII Airborne Corps in Operation MARKET, the "Battle of the Bulge" and Operation VARSITY. This monograph, through an investigation into available primary sources: field orders, after action reports, and personal accounts reinforced with secondary source analysis, demonstrates that Ridgway overcame inadequacy. Although he completed all the military education available in his era, it was only after the intense crucible of three combat operations that he eventually applied operational art successfully. Evidence shows that Ridgway achieved tactical success but did not adequately apply operational art for HUSKY, NEPTUNE and MARKET. Ridgway learned from his failures and progressively improved his application of operational art during the Bulge and VARSITY. Not until his fifth experience, Operation VARSITY, did he master operational art. Within U.S. Army Mission Command, the most important subcomponent of visualization depends on eleven elements of operational art. These elements are the template this monograph uses in considering the factors of Ridgway's maturation of operational art through five combat operations.

Table of Contents

INTRODUCTION	1
RIDGWAY'S LEADER DEVELOPMENT	6
Education	7
Training.....	14
Mentorship.....	16
RIDGWAY LEARNED FROM FAILURE	19
Operation HUSKY.....	19
Operation NEPTUNE	25
Operation MARKET.....	30
RIDGWAY MASTERED OPERATIONAL ART	34
Battle of the Bulge	34
Operation VARSITY	39
CONCLUSION.....	43
Implications.....	45
Recommendations.....	46
APPENDICES	47
Appendix A: Key Terms and Definitions	47
Appendix B: Matthew B. Ridgway Biographical Timeline.....	49
Appendix C: Operational Art in Theory	51
Appendix D: Operational Art in Doctrine.....	54
BIBLIOGRAPHY	56
Primary Sources	56
Secondary Sources	58

List of Figures

Figure 1: Understand, Visualize, Describe, Direct, Lead and Assess.....	5
Figure 2. Ridgway’s Operational Art at Operations HUSKY, NEPTUNE and MARKET	33
Figure 3. Ridgway’s Maturation of Operational Art.....	44

INTRODUCTION

“All your study, all your training, all your drill anticipates the moment when abruptly the responsibility rests solely on you to decide whether to stand or pull back, or to order an attack that will expose thousands of men to sudden death.”

– General Matthew B. Ridgway¹

On December 22, 1950, the situation for the Eighth U.S. Army fighting in Korea was dire. The Eighth U.S. Army had previously advanced through nearly the entire expanse of the Korean peninsula to its northern boundary at the Yalu River. It abandoned the capital city of Pyongyang and retreated below the 38th Parallel that centrally divided the peninsula because of an attack by two hundred thousand Chinese. The Eighth Army had lost every bit of its fighting spirit and suddenly its commander, General Walton Walker died in a jeep accident.² Less than four days later, Lieutenant General Matthew B. Ridgway assumed command. Ridgway immediately met with General Douglas A. MacArthur, the Supreme Allied Commander, along with Eighth Army subordinate corps commanders to gain understanding of the situation. Next Ridgway immediately visited the soldiers on the front lines and started his understanding of the enemy and the operating environment. In this short time, Ridgway began correctly visualizing how future military operations should unfold.³

General Ridgway developed this astonishing ability of accurately visualizing military operations through the means of a solid foundation of leader development combined with combat experience. Over the course of the first 24 years of his career, he received professional schooling through the Army's educational institutions. Key training assignments such as nearly three years at the War Department, War

¹ Matthew B. Ridgway, *The Korean War* (New York, N.Y.: Da Capo Press, 1986), 79.

² Matthew B. Ridgway, as told to Harold H. Martin. *Soldier: The Memoirs of Matthew B. General Ridgway* (New York: Harper, 1956), 195.

³ U.S. Army, Field Manual (FM) 3-0, *Operations 2008, Change No. 1*. (Washington, DC: U.S. Government Printing Office, 22 February 2011), 5-25. Defines commander's visualization as, “the mental process of developing situational understanding, determining a desired end state, and envisioning the broad sequence of events by which the force will achieve that end state.”

Plans Division (WPD) reinforced his education. Moreover, many combat experiences, including several failings during Operations HUSKY, NEPTUNE, and MARKET, followed by his successes at the Battle of the Bulge and Operation VARSITY solidified his ability to quickly and accurately assess and then visualize combat operations. Well developed leadership and multiple combat experiences produced a commander capable of rapidly visualizing an entire campaign and reversing an all but lost situation. General Ridgway so successfully visualized the deteriorating situation in Korea and changed it, that within five months, President Harry S. Truman named Ridgway as the Supreme Commander, Allied Powers replacing MacArthur.⁴

General Matthew Bunker Ridgway (1895-1993) was one of the United States Army's greatest general officers having commanded at every level and culminating thirty-eight years of service as the nineteenth Chief of Staff of the U.S. Army. Throughout his career, he demonstrated that determination in every duty assignment or educational program, led to more advanced duty assignments and educational programs. General Ridgway was a 1917 graduate of the United States Military Academy, a 1935 graduate of the United States Army Command and General Staff School, and a 1937 graduate of the United States Army War College. Several prominent figures mentored General Ridgway in his life, among them four men that eventually became the Army's four five-star Generals: Generals of the Army George C. Marshall, Dwight D. Eisenhower, Douglas A. MacArthur, and Omar N. Bradley.⁵ During World War II, General Ridgway served as the division commander of the 82nd Airborne Division through Operations HUSKY and NEPTUNE, and later as the corps commander of the XVIII Airborne Corps through Operation MARKET, at the Battle of the Bulge, and during Operation VARSITY. During the Korean War, General Ridgway served as a field army commander of the Eighth U.S. Army. Late in his career,

⁴ Harry S. Truman, *Public Papers of the Presidents of the United States: Harry S. Truman, 1951* (Washington, DC: U.S. Government Printing Office, 1965), 222-227. [http://www.trumanlibrary.org/publicpapers/index.php?pid=289&st=General Ridgway &st1=](http://www.trumanlibrary.org/publicpapers/index.php?pid=289&st=General%20Ridgway%20&st1=) (accessed January 23, 2011). Included the duty titles of Commander in Chief, Far East; and Commanding General, U.S. Army, Far East.

⁵ Not included in this list is General of the Army Henry H. Arnold who was redesignated General of the Air Force pursuant to Public Law 58, 81st Congress, May 7, 1949. <http://www.history.army.mil/html/faq/5star.html>

Ridgway twice served as a theater commander and twice served as supreme commander of allied forces.⁶ General Ridgway reached the zenith of the Army Officer Corps having led thousands of soldiers in battle through two wars, first at the operational level and then again at the strategic level of war.

Throughout the years that Ridgway served, the U.S. Army did not recognize the operational level of war, as it currently does, as the intermediate level between battlefield tactics and national strategy.⁷ Although several prominent military theorists in the late nineteenth century and early twentieth century wrote extensively about operational art, U.S. Army doctrine did not incorporate the concept, nor did professional military schools teach it, during Ridgway's era.⁸ Yet somehow, Ridgway eventually applied operational art based on an informed vision that facilitated the integration of ends, ways and means across the levels of war.

Current U.S. Department of Defense doctrine defines operational art as “[t]he application of creative imagination by commanders and staffs – supported by their skill, knowledge, and experience—to design strategies, campaigns, and major operations and organize and employ military forces. Operational art integrates ends, ways, and means across the levels of war.”⁹ Army operational-level commanders visualize this integration, based on understanding their environment relying on personal factors of their education, experience, intellect, intuition, and creativity.¹⁰ U.S. Army doctrine prescribes that commanders exercise mission command through a model of “understanding, visualizing, describing, directing, leading, and assessing operations (see Figure 1).”¹¹ That second of six components, visualization, is the most important component, and the one that Ridgway eventually mastered. In the

⁶ William Gardner Bell, *Commanding Generals and Chiefs of Staff, 1775-1982*, Center of Military History (Washington, DC: Government Printing Office, 1983), 128.

⁷ For more discussion on the operational level of war, see U.S. Army, Field Manual (FM) 3-0, *Operations 2008*, with Change No. 1 (Washington, DC: U.S. Government Printing Office, 22 February 2011), 7-12. “The operational level links employing tactical forces to achieving the strategic end state. At the operational level, commanders conduct campaigns and major operations to establish conditions that define that end state.”

⁸ For more discussion on operational art in theory, see Appendix C.

⁹ Department of Defense, Joint Publication (JP) 3-0, *Joint Operations*, 17 September 2006, Incorporating Change 2 (Washington, DC: U.S. Government Printing Office, 22 March 2010), GL-22.

¹⁰ U.S. Army, FM 3-0, *Operations 2008*, 7-18.

¹¹ *Ibid.*, 5-15.

U.S. Army, the concept of mission command is the application of “leadership to translate decisions into actions—by synchronizing forces and warfighting functions in time, space, and purpose—to accomplish missions.”¹² The operational commander first starts to “understand” by recognizing the national strategic endstate, the enemy and analyzing operational variables.¹³ Following understanding, the operational commander then must “visualize” operations. Commanders do so based on visualization sub-components such as principles of war, operational themes, experience, running estimates, and on the elements of operational art. The most important subcomponent of visualization is the listing of elements of operational art of which there are eleven in U.S. Army doctrine. These elements are endstate and conditions; centers of gravity; direct or indirect approach; decisive points; lines of operation or effort; operational reach; tempo; simultaneity and depth; phasing and transitions; culmination; and risk (see Appendix A for definitions). How did General Matthew Ridgway’s visualization mature?

¹² U.S. Army, FM 3-0, *Operations* 2008, 5-70.

¹³ Ibid., 1-5. Army operational variables are political, military, economic, social, information, infrastructure, physical environment, and time variables.

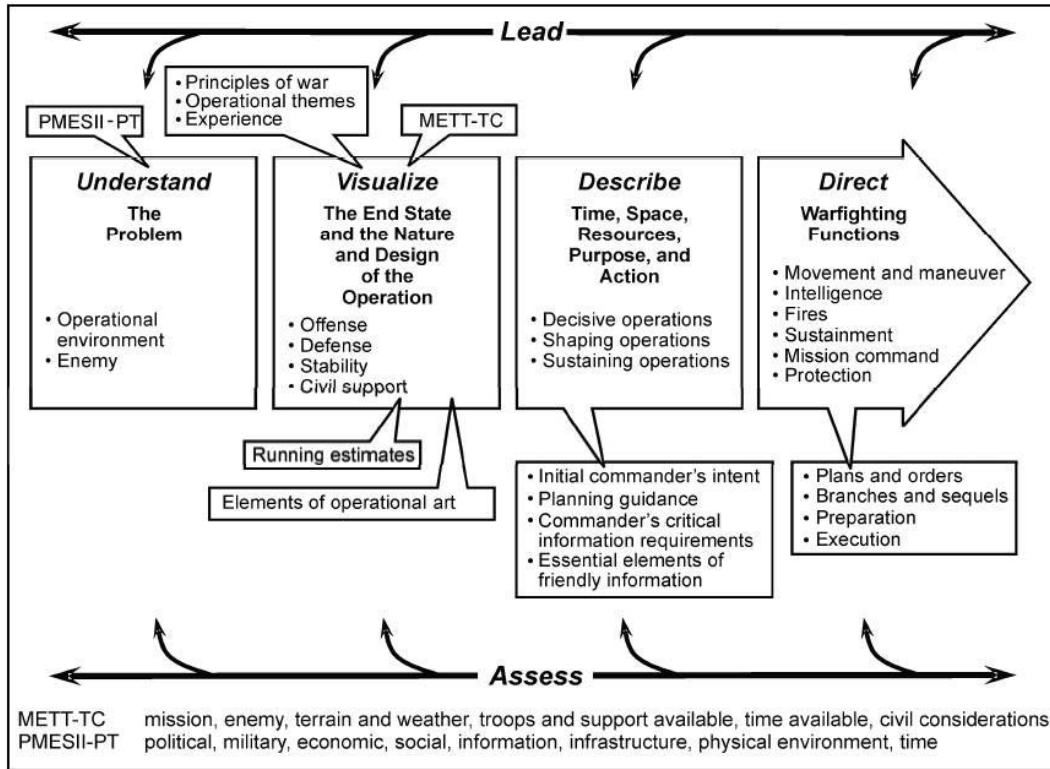


Figure 1: Understand, Visualize, Describe, Direct, Lead and Assess, (U.S. Army FM 3-0).¹⁴

To understand how Ridgway's ability to visualize matured, this study first reviewed how Ridgway's visualization began in his leader development, then analyzed several primary sources in determining when he learned from the experiences of failure, and finally, when he succeeded. Primary sources reviewed regarding Ridgway's leader development include the *Regulations Governing the System of Military Education in the Army*, *Annual Report of the Secretary of War 1920*, the *United States Army Field Services Regulations 1923*, *The Papers of George Catlett Marshall*, and *Annual Report for the Command and General Staff School Year 1933-1934*, as well as General Ridgway's own memoirs. Key historical accounts from the military schools reinforced these sources such as the *History of the U.S. Army War College*, and the *Military History of the U.S. Army Command and General Staff College*, among other relevant secondary works. Primary sources analyzed regarding Ridgway's combat experience

¹⁴ U.S. Army, FM 3-0, *Operations* 2008, 5-3.

include actual reports of operations, administrative orders, and field orders issued by Ridgway's headquarters. Some of these reports are "82d Airborne Division in Sicily and Italy," "Report of Normandy Operations," "Summary of Operations 18 December 1944 to 13 February 1945," and "Summary of Ground Forces Participation in Operation VARSITY." In most cases, Ridgway himself signed these after action reports. The Army *Field Service Regulations* from 1941 stated that a "Decision as to a specific course of action is the responsibility of the commander alone. While he may accept advice and suggestions from any of his subordinates, he alone is responsible for what his unit does or fails to do."¹⁵ In analyzing the results of five sequential combat experiences for the absence or the presence of the elements of operational art, and since Ridgway bore total responsibility, it is logical that he would have conceptualized the operations ahead of time. The presence of these elements proves that not only did the organizations mature, but so did Ridgway's visualization. By his sixth combat experience, Ridgway demonstrated superior vision that was not evident in his first combat experience. The thesis of this study is that General Matthew Ridgway's visualization of operations matured based on his leader development, what he learned from failure and from mastering operational art.

RIDGWAY'S LEADER DEVELOPMENT

By the time General Ridgway entered combat during WWII in 1942, he benefitted from a solid foundation of 24 years of leader development. Ridgway had attended the USMA at West Point, two company grade courses at the Infantry School at Fort Benning, the United States Army Command and General Staff School (CGSS) and the United States Army War College (AWC). He served in several key training assignments such as an instructor at West Point, Assistant Chief of Staff for Operations and Training (G-3) at Second Army, and as a branch chief at the War Plans Division. Additionally, Ridgway received mentorship from several General officers including Marshall, MacArthur and General Frank R.

¹⁵ War Department, *Field Manual (FM) 100-5, Field Service Regulations, Operations* (Washington, DC: U.S. Government Printing Office, 22 May 1941), 24.

McCoy. These Army educational institutions, key training experiences and mentorship from senior officers all significantly contributed to General Ridgway's leader development.

Education

General Matthew B. Ridgway completed all the military education available in his era. He received a commission from the United States Military Academy and then attended typical company-grade officer courses at the Infantry School at Fort Benning, GA. Later in his career as a field-grade officer, the Army selected Ridgway for attendance at its two foremost educational programs. These were the CGSS and the AWC. Through each educational curriculum, Ridgway persevered to learn the Army doctrine and prepared for leading organizations although he demonstrated mediocre scholastic performance.

The first twenty years of Ridgway's military experience were representative of the era. He spent four years in a pre-commissioning program and later attended normal Infantry branch courses. Ridgway entered the United States Military Academy (USMA) at West Point in June 1913 and by graduation, the academy did three things for him.¹⁶ It taught him core leadership values, gave him a baccalaureate education and prepared him for combat. First, the academy further developed the individual core values established in Ridgway by his father, himself a retired Army Colonel and a USMA graduate. One example of basic leader development was the physically and mentally demanding rite of passage for new cadets known as 'Beast Week.' Ridgway persevered through its trials because he knew his father endured Beast Week, and therefore he could do it also.¹⁷ Ridgway later realized the importance of this character-developing event at WestPoint that "instilled in him the ideals of duty," when facing adversity.¹⁸ Ridgway valued participation in several extra-curricular activities and built life-long lasting friendships.¹⁹ When he

¹⁶ Ridgway, *Soldier*, 23.

¹⁷ Ibid., 22.

¹⁸ Ibid., 300.

¹⁹ Ibid., 26-27.

was caught hazing a first-year cadet, Ridgway accepted the commandant's punishment. He demonstrated a survivor's attitude in the face of adversity. To him, it seemed simply like additional athletic exercise.²⁰

Second, West Point gave him a baccalaureate education. Academically, Ridgway described his scholastic achievements as "respectable" but that he was not a "genius."²¹ Matthew Ridgway graduated West Point in the 60th percentile finishing number 56 of 139 cadets.²² Because his class standing was so low by the time it was his turn to select branch assignments, Matthew Ridgway did not get his first branch choice of artillery like his father, but rather his second choice of infantry. He said he never regretted it though.²³ Although he did not participate in the world war in Europe, Ridgway and the entire class of 1917 graduated from West Point on April 20th, six weeks early and "only days after the United States entered the [first world war]."²⁴

Ridgway's education included branch specific courses. Eight years after graduating from West Point, Ridgway attended the Company Commander's course at the Infantry School at Fort Benning, Georgia, graduating in June 1925. Five years thereafter, Ridgway returned to Fort Benning, this time to attend the Advanced Course at the Infantry School. Infantry officers expected to attend these two courses in their career. However, Ridgway's selection for attendance at CGSS marked the difference of a special career.

The CGSS continued Ridgway's leader development through a curriculum focused on preparing officers to command large Army organizations. A highly selective school, CGSS provided its field-grade officer students with in-depth doctrinal knowledge drawn from the Army's experiences in the First World

²⁰ Ridgway, *Soldier*, 26.

²¹ *Ibid.*, 28.

²² Clay Blair, *Ridgway's Paratroopers: The American Airborne In World War II* (Garden City, NY: Dial Press, 1985), 529; and George Charles Mitchell, *Matthew B. Ridgway: Soldier, Statesman, Scholar, Citizen* (Mechanicsburg, PA: Stackpole Books, 2002), 9.

²³ Ridgway, *Soldier*, 27.

²⁴ Theodore J. Crackel, *West Point: A Bicentennial History* (Lawrence, KS: University Press of Kansas, 2002), 185; and Matthew B. General Ridgway, as told to Harold H. Martin. *Soldier: The Memoirs of Matthew B. General Ridgway* (New York: Harper, 1956), 27.

War. Again, Ridgway demonstrated mediocre scholastic performance. However, CGSS taught him one of the most important lessons a commander needed, visualization.

Matthew B. Ridgway entered CGSS at Fort Leavenworth, Kansas on September 4, 1933. He was one of 118 U.S. Army officers selected that year for the two-year course.²⁵ “Students were selected to attend by branch chiefs, usually general officers... eager to put their best officers forward in competition for future general staff selection and general officer promotions, [they] normally selected highly reputable officers,” according to historian Peter J. Schifferle.²⁶ Selection meant something special and was eventually an “important discriminator in selection for division command.”²⁷ CGSS was critical to Ridgway’s leader development.

The mission of the CGSS was “training officers in: 1) the combined use of all arms in the division and the army corps; 2) the proper functions of commanders of division and or army corps; and 3) the proper functions of General Staff officers of divisions and army corps.”²⁸ The CGSS endeavored to

²⁵ S. Heintzelman, MG, USA, *Annual Report for the Command and General Staff School Year 1933-1934* (Fort Leavenworth, KS: Command and General Staff School Press, 1934), 5.

²⁶ Peter J. Schifferle, *America's School for War: Fort Leavenworth, Officer Education, and Victory in World War II*, Modern War Studies (Lawrence, KS: University Press of Kansas, 2010), 128.

²⁷ “On the average, World War II division commanders came into the Army in 1915, with 1904 as the earliest date, 1929 as the latest, and 1917 as the most frequent commissioning year. Fifty-two percent were graduates of the United States Military Academy. Twenty-four percent had college degrees from other institutions, and an equal percent held no college degree. All these officers eventually became members of the combat arms: 44 percent infantry, 28 percent field artillery, and 28 percent cavalry. Twenty-eight percent of the total officers studied had no formal basic branch training; an additional 12 percent had no advanced branch training, and 16 percent of these two groups had neither basic nor advanced branch training. For the most part, these men were cavalry officers who received basic training in units, or they were officers caught up in the World War I rush and did not have the opportunity for formal basic branch training. Amidst all these career variables, one finds a common element in these officers' education: all were graduates of the Command and General Staff School at Fort Leavenworth, Kansas. In addition, nine of the twenty-five attended the two-year CGS course. This course provided all the officers with basic techniques and procedures, and in a real sense, the officers shared a common military theoretical foundation. Furthermore, 76 percent were Army War College graduates and 78 percent were selected for the General Staff Corps. ... These last three selections, for the Command and General Staff School, the Army War College, and the General Staff Corps, were interwar indicators of high individual potential for future service at high levels of command.” Wade, “World War II Division Commanders,” 5.

²⁸ U.S. Army Command and General Staff College (CGSC) Library, *A Military History of the US Army Command and General Staff College, 1881-1963* (Fort Leavenworth, KS: U.S. Army Command and General Staff College), 28-29. No author named.

produce officers that were “confident in their competence at the division and corps level.”²⁹ “The heart of the course, ‘tactical principles and decisions,’ consisted of increasingly complex tactical problems involving increasingly large combined arms formations. The entire curriculum emphasized the command process, involving interaction between commanders and general staff officers, and tactical decision making.”³⁰

The CGSS was preparing the best of the Army officer corps by arming them with the hard-earned knowledge of tactical principles and decision-making skills “reflecting the experience of the operational frame work of stabilized fronts and mobile warfare of the Meuse-Argonne offensive.”³¹ Schifferle noted the CGSS understood that “the thing to be avoided at all costs was a repeat of the disasters and near-disasters the Allied Expeditionary Forces (AEF) experienced in 1917 and 1918.”³² Not only did the CGSS curriculum reflect these lessons learned, but Army doctrine of the era did as well.

Complementing the Army capstone doctrine for operations at the time, the U. S. Army *Field Services Regulations* published in 1923, CGSS taught principles of combat operations centered on combined arms, effective command and control, a reliance of firepower, a consistent doctrine, a thorough knowledge of the principles of operations, knowledge of large formations, the science of war, and problem solving.³³ The *Field Service Regulations* were “designed especially for the government of the operations of large units and of small units forming a part of larger units.”³⁴ The school determined that “the scope of the course presented should include: 1) tactics and logistics of divisions (including a review of the reinforced brigade) and army corps, including branches associated therewith; 2) functions of

²⁹ Peter J. Schifferle, “America’s School for War: Fort Leavenworth, Officer Education, and Victory in World War II” (lecture, meeting of the Fort Leavenworth Historical Society, Frontier Army Museum, Fort Leavenworth, KS, 18 November 2010).

³⁰ Timothy K. Nenninger, “Leavenworth and Its Critics: The U.S. Army Command and Staff School, 1920-1940,” *The Journal of Military History*, Vol. 58, No. 2 (April 1994), 203.

³¹ Schifferle, *America’s School for War*, 189.

³² Ibid.

³³ Schifferle, “America’s School for War,” lecture.

³⁴ The War Department, *The Field Services Regulations United States Army 1923* (Washington, DC: Government Printing Office, November 2, 1923).

division and corps commanders; 3) organization and functioning of division and corps staffs.”³⁵ Schifferle also accounted that CGSS curriculum trained officers on “producing estimates of the situation, visualization, delivering suitable instructions and orders, making prompt decisions and developing training.”³⁶ Although CGSS prepared Ridgway for division command and introduced visualization to him, he might not have completely comprehended everything as his grades indicated.

Similar to his academic standing at West Point, Ridgway finished CGSS in only the 61st percentile. He ranked 46 out of 118 graduating officers.³⁷ In spite of this mediocre performance, the service school evaluations of the era were the most important in the career, unlike current times where field evaluations weigh so much more heavily as indicators of career potential.³⁸ However, it is the fact that he graduated that matters. Graduating from the Command and General Staff School, as author Gary Wade observed, was the first of three “interwar indicators of high individual potential for future service at high levels of command.”³⁹ Just two years later, the Army selected Matthew Ridgway for the second indicator of general officer potential, the AWC.

The AWC was the capstone of the officer education system and Ridgway considered it “the most advanced school in the Army.”⁴⁰ The AWC prepared senior field-grade officers for commanding the Army’s largest organizations through a curriculum focused on carefully planning the execution of joint combat operations. At the AWC dedication ceremony in 1908, then-Secretary of War Elihu Root told AWC students and the War Department General Staff that they were “brought together to do the thinking for the Army.”⁴¹ Thinking was the key.

³⁵ CGSC Library, *A Military History of the US Army Command and General Staff College*, 28-29.

³⁶ Schifferle, “America's School for War,” lecture.

³⁷ Robert H. Berlin, *U.S. Army World War II Corps Commanders: A Composite Biography* (Fort Leavenworth, KS: U.S. Army Command and General Staff College, Combat Studies Institute, 1989), 11.

³⁸ Schifferle, “America's School for War,” lecture.

³⁹ Wade, “World War II Division Commanders,” 6.

⁴⁰ Ridgway, *Soldier*, 46.

⁴¹ Henry G. Gole, *The Road To Rainbow: Army Planning For Global War, 1934-1940* (Annapolis, Maryland: Naval Institute Press, 2003), 18.

Although the term *operational art* did not enter U.S. Army doctrine until 1986, the Army taught characteristics of the concept at its military colleges during the interwar years of the 1920s and 1930s.⁴² The AWC taught its student officers, including Matthew Ridgway, to think and plan joint campaigns linking strategy to the tactical level. According to historian Harry P. Ball, the AWC “divided its activity into two categories, ‘to train’ and ‘to instruct.’”⁴³ The training focused on the student officer acquiring skills concerning “the conduct of field operations of the army and higher echelons [and] joint operations of the army and the navy.”⁴⁴ The instruction focused on providing the student officers with “political, economic and social matters which influence the conduct of war [and] in the strategy, tactics, and logistics of large operations in past wars, with special reference to the World War.”⁴⁵ By the early 1930s, the AWC divided its academic year into two phases that started with “Preparation for War” and “Conduct of War.”⁴⁶ Historian Henry G. Gole observed, “The [AWC] mission was to prepare officers to command echelons above corps [and] to prepare officers for duty in the War Department General Staff.”⁴⁷ The AWC expected students to “think at the national level.”⁴⁸ Unlike CGSS that prepared him for the organization and functioning of divisions and corps, AWC taught Ridgway strategic warfare through practical application methods. The students would “learn things by doing things.”⁴⁹

The AWC, in partnership with the Naval War College (NWC), conducted joint war games beginning in 1923.⁵⁰ Ball observed that, while Ridgway attended the AWC in 1937, the curriculum

⁴² Michael R. Matheny, “The Development of the Theory and Doctrine of Operational Art in the American Army, 1920-1940” (Monograph, School of Advanced Military Studies, U.S. Army Command and General Staff College, Fort Leavenworth, KS, 22 March 1988), 36.

⁴³ Harry P. Ball, *Of Responsible Command, A History of the U.S. Army War College* (Carlisle Barracks, PA: Alumni Association of the U.S. Army War College, 1983), 211.

⁴⁴ Ball, *Responsible Command*, 211.

⁴⁵ Ibid.

⁴⁶ Ibid., 225.

⁴⁷ Gole, *Rainbow*, 19.

⁴⁸ Ibid., xix. “The AWC commandant from 1932-1935, MG George S. Simonds, wanted his officers to think at the national level.”

⁴⁹ Ibid., 17.

⁵⁰ Ball, *Of Responsible Command*, 202.

required students to conduct planning using scenarios of the “Rainbow Plans” developed concurrently with the War Plans Division. By the time Ridgway was a student, the AWC had sustained a thirty-five year collaborative arrangement with the General Staff at Washington Barracks in Washington, D.C.⁵¹ Additionally, Gole explained, “In the years between 1934 and 1940, AWC classes conducted systematic planning for coalition warfare against Japan, versus Japan and Germany, and for hemispheric defense with Latin American allies.”⁵² It is particularly interesting that one of the plans was the “Orange” plan in which students considered “coalition warfare, hypothesizing a situation in which the United States would align itself with Great Britain, China, and the Soviet Union against Japan.”⁵³ Ridgway practiced, albeit in a classroom setting, campaigning beside the Russians who developed operational art.⁵⁴

Unlike the CGSS that taught Ridgway to recite regulations and accept doctrinal tactics and principles, the AWC “encouraged reflection and originality.”⁵⁵ Army regulations at the time required AWC students to apply the knowledge gained throughout their career up to that point, rather than simply receiving more instruction.⁵⁶ The practical application of creative imagination to design strategies and campaigns, characteristic of the modern operational art definition, was evident in the AWC curriculum that allowed students to ask, “The most imaginative what-if questions – those about waging war as a member of a coalition fighting an enemy coalition.”⁵⁷ Also unlike CGSS where students competed against one another, the AWC fostered teamwork in planning.⁵⁸ Team creativity in complicated planning scenarios enabled exploration into possibilities; there were “no hard-and-fast ‘school solutions.’”⁵⁹ Gole

⁵¹ William J. Webb, “The Root Reforms and Army Schools and Branches,” Center for Military History website, 31 May 2001: <http://www.history.army.mil/documents/1901/Root-Schools.htm> (accessed 3 JAN 11).

⁵² Gole, *Rainbow*, xix.

⁵³ Ball, *Of Responsible Command*, 226.

⁵⁴ For more discussion on Russian Operational Art, see Appendix C.

⁵⁵ War Department, General Orders No. 115, *Regulations Governing the System of Military Education in the Army*, June 27, 1904 (Washington, DC: Government Printing Office, 1904), 7.

⁵⁶ Ibid.

⁵⁷ Gole, *Rainbow*, 29.

⁵⁸ Ibid., 125.

⁵⁹ Ibid., 18.

also noted, “The officers at the college and on the General Staff enjoyed close personal and professional relationships, begun at West Point, continued at the Infantry School at Fort Benning, at the Command and General Staff courses at Fort Leavenworth, and at the Army War College in Washington.”⁶⁰

Ridgway was the product of a comprehensive Professional Military Education that determined that:

“The business of the professional soldier is to concern himself with the horrors of war. He must know the offensive and defensive strength of weapons, the cost of war in dollars and cents, the speed and success with which the industrial strength of the nation can be mobilized, how the strength of an army is wasted in action, and how long it can be preserved and restored. He must know how long it takes to train men, and in what that training must consist.”⁶¹

Through four years at West Point, two Infantry School Courses, the highly selective CGSS and AWC programs, Ridgway certainly received a solid educational component of his leader development. He learned about not only core leadership values, but also Army regulations, doctrine, planning, commanding large organizations and visualization. More importantly, he received all the Army education available in preparation for commanding large organizations in combat. In addition, training and mentorship would fulfill his total leader development.

Training

Three key training assignments reinforced Ridgway’s education. Early in his career, he served as an instructor at West Point. Later, he served as the Assistant Chief of Staff for Operations and Training (G-3) at Second Army. Ridgway also served nearly three years at the War Department in the War Plans Division. All three assignments enhanced his leader development.

In September of 1918, only 16 months after graduating from USMA, and with only the experience of one non-combat assignment along the Mexican border, the Army selected Ridgway for a teaching position at the academy. Ridgway returned to West Point although he resented the assignment thinking

⁶⁰ Gole, *Rainbow*, 122.

⁶¹ US Department of War, *War Department Annual Reports*, volume 1, 1920, p4-5, as cited in Phillip Carlton Cockrell “Brown Shoes and Mortar Boards: US Army Officer Professional Education at the Command and General Staff School at Fort Leavenworth, Kansas, 1919-1940,” (PhD diss., University of South Carolina, 1991), 68.

that it was career ending. Ridgway's duty was in the department of romance languages to teach French in spite of the fact that he could not speak French. He wanted however, to teach Spanish because he was proficient in that language and eventually received the opportunity he wanted. Ridgway's tour of duty on the USMA Faculty lasted six years and caused him fear that so much time away from Soldiers was atrophying his leadership skills. To compensate, Ridgway volunteered as a tactical officer in the evenings, just to keep his skills sharp. These experiences of teaching Army cadets, mastering a foreign language and extra training demonstrate how Ridgway forced himself to adapt to challenging circumstances.

Ridgway served as the Assistant Chief of Staff for Operations and Training (G-3) at Second Army headquartered in Chicago whereby he planned training maneuvers and command post exercises.⁶² It was Ridgway's first field-grade officer assignment after graduating from CGSS and he implemented the staff lessons he learned in school. With war looming in Europe, Ridgway took the assignment seriously and pushed himself to visualize how mechanized forces would maneuver across farm fields of the Great Lakes Region. Ridgway did everything he could to survey the terrain including conducting an aerial reconnaissance from an open cockpit two-seat plane in freezing temperatures.⁶³ Ridgway recounted his serious approach to visualizing the training in his memoirs, by writing, "Even after we were so far committed that it would be impossible to change the plans, I would wake up at night in a cold sweat, visualizing hosts of angry farmers chasing me with pitch-forks because their cornfields had been ruined. I had proved to be a pretty good school soldier, but this thing wasn't on paper. It was real." The Army recognized Ridgway's determination in planning as the G-3 and later rewarded him with another prominent training opportunity.

In September 1939, just two years after graduating from the pinnacle of the Army's Professional Military Education system, the Army selected Matthew Ridgway for the third indicator of general officer potential, service on the War Plans Division (WPD) at the War Department in Washington, D.C. There,

⁶² Ridgway, *Soldier*, 45.

⁶³ *Ibid.*, 46.

his primary responsibility was planning for contingency operations throughout Latin America.⁶⁴ His input into the planning efforts at WPD stemmed from over 22 years of experience and continued the planning initiated at the AWC. While at WPD, Ridgway enjoyed a close working relationship with General Marshall and the benefit of mentorship.

Mentorship

Ridgway complemented his education and training with mentorship, thus fulfilling his total leader development. Prior to entering combat as a division commander in WWII, three prominent General officers mentored Ridgway at various points in his career. General MacArthur noticed Ridgway's talent early while instructing at West Point. Ridgway and Marshall crossed paths several times throughout Ridgway's career. General Frank R. McCoy recognized Ridgway's talent and he brought Ridgway under his guidance several times as well. In each case, the Generals recognized Ridgway's leadership potential and further developed it.

General Ridgway wrote in his memoirs that, "Many an officer does get his big opportunities because some higher commander has known him for years and has confidence in him. In my own case, certainly, that door of opportunity opened to me because two magnificent soldiers, Generals Frank R. McCoy and George C. Marshall, had come to know and have faith in me."⁶⁵ The Army has a strong tradition and an expectation of professional mentoring from senior officers to their junior officers who show great potential.

Of the three early general-officer mentors to Ridgway, General MacArthur had the earliest direct contact with him. MacArthur first observed Ridgway at West Point. At the time, MacArthur was the USMA superintendent while Ridgway was teaching foreign languages. MacArthur was so impressed with Ridgway's determination in trying to maintain his warrior skills after duty hours that MacArthur assigned

⁶⁴ Harold R. Winton, *Corps Commanders of the Bulge: Six American Generals and Victory in the Ardennes*, Modern War Studies (Lawrence, KS: University Press of Kansas, 2007), 41.

⁶⁵ Ridgway, *Soldier*, 26.

Ridgway as the director of athletics.⁶⁶ Ridgway learned the importance of demonstrating great resolve in this and throughout subsequent assignments. Ridgway's determination paid off for him whereby he later received advanced training and educational opportunities.

General Frank R. McCoy was also an early key mentor and contributor to Ridgway's leader development by teaching him military diplomacy and assigning him to a principle Army-level staff position. McCoy first noticed Ridgway when the latter was a company commander in China. McCoy remembered him when forming a team in 1927 for a U.S. diplomatic mission to Nicaragua "to supervise a free election in," in what Ridgway described in his memoirs as "that strife-torn little Republic."⁶⁷ McCoy invited Ridgway along as the "as secretary of the electoral board." Ridgway, only a captain at the time, learned from a military diplomat the valuable leadership skills of "patience, fairness and tact."⁶⁸ After Ridgway graduated from CGSS in 1935, McCoy once again called on Ridgway. This time it was an assignment as McCoy's G-3 at Second Army. Ridgway's duty performance in that assignment once again caught the attention of another of Ridgway's senior mentors, Marshall.

Marshall more than the others, seemed to have the closest and the most frequent direct contact with Ridgway. In 1922, while commanding a company in the 15th Infantry Regiment stationed in Tientsin, China, Ridgway's battalion commander was Lieutenant Colonel George C. Marshall.⁶⁹ The two men's paths crossed several more times. Marshall was assistant commandant of the Infantry school when Ridgway attended the advanced course at Fort Benning. There Ridgway graduated top of his class and Marshall recognized his "dramatic talent."⁷⁰ Marshall was extremely impressed with Ridgway's performance during the summer of 1936 while Ridgway was overseeing military exercises in Michigan as the Second Army G-3. In a personal letter to Ridgway afterwards, Marshall wrote, "You personally are to be congratulated for the major success of all the tactical phases of the enterprise...did such a perfect job

⁶⁶ Ridgway, *Soldier*, 67.

⁶⁷ Ibid., 38.

⁶⁸ Ibid., 39.

⁶⁹ Winton, *Corps Commanders*, 40.

⁷⁰ Ibid.

that there should be some way of rewarding you other than saying it was well done.”⁷¹ In May 1939, while stationed in San Francisco as the G-3 for Fourth Army, Marshall – at that time already named as the next Army Chief of Staff – detailed Ridgway, then still a major, to accompany him on a diplomatic mission. The mission was to Rio de Janeiro, Brazil to which Marshall and Ridgway traveled by ship and “had long conversations” on the cruise to South America.⁷² Marshall solicited Ridgway’s thoughts for rebuilding the Army. Historian Harold Winton observed that all these events pulled Ridgway deeper into Marshall’s “circle of confidants.” Ridgway’s next assignment was to the War Plans Division whereby he was Marshall’s daily operations briefer.⁷³

Although Ridgway received general officer mentorship early and often prior to WWII, his leader development did not stop there. Throughout the remainder of his career into the mid-1950s, Ridgway received the counsel of other prominent general officers. It is quite something special, when a junior officer’s mentors are men who eventually achieve five-star rank, one of whom later becomes Secretary of State and another ultimately becomes President of the United States. Matthew Ridgway was often in the presence of greatness. The four Generals of the Army, George C. Marshall, Dwight D. Eisenhower, Douglas A. MacArthur, and Omar N. Bradley each had profound impacts on Matthew Ridgway and his leader development.

Ridgway received tremendous preparation for command of large organization in the impending war. With a professional education from West Point, the Infantry School, the CGSS and the AWC he had the requisite knowledge. From his training assignments as a USMA instructor, the G-3 at Second Army, and as a branch Chief at the War Plans Division he developed tremendous leadership skills. The mentoring Ridgway received from Generals Marshall, MacArthur and McCoy solidified his comprehensive leader development. When Marshall finally was the Chief of Staff, he drew upon his past observations of officers rotating through the Infantry school, the AWC and working on the War Plans

⁷¹ George C. Marshall, ed. Bland, Larry I. and Stevens, Sharon Ritenour. *The Papers of George Catlett Marshall* (Lexington, VA: The George C. Marshall Foundation, 1981), 505.

⁷² Winton, *Corps Commanders*, 41.

⁷³ Ibid.

Division, in selecting the best for division and corps commands in the Second World War. In 1942, Matthew Ridgway was one of Marshall's picks for a division.⁷⁴

RIDGWAY LEARNED FROM FAILURE

General Ridgway commanded the 82nd Airborne Division in Operation HUSKY in Sicily and Operation NEPTUNE in Normandy. Later, he commanded the XVIII Airborne Corps in Operation MARKET in the Netherlands. In all three instances, forces under Ridgway's command achieved considerable tactical success. However, there is little evidence that Ridgway applied operational art in these three operations. In Sicily, not one of the eleven elements of operational art is evident. In Normandy, Ridgway applied three of the eleven elements of operational art. In Holland, six of the eleven elements were present in planned operations for which Ridgway bore responsibility. The progressive application of the elements of operational art in these three sequential operations indicates that General Ridgway's operational art, informed by his ability to visualize, started developing. At HUSKY, Ridgway's leader development was not enough and operations were not as efficient as possible.

Operation HUSKY

The airborne assault invasion into Sicily was also the first combat test for General Matthew B. Ridgway and the first test for employing the airborne division.⁷⁵ Although Ridgway developed skill and knowledge, he lacked combat experience (all three characteristics are required in the operational art definition). Although Ridgway prepared the 82nd Airborne Division through intensive training conducted in North Africa, Operation HUSKY was marked with insufficient resources, inconsistent command and

⁷⁴ Robert H. Berlin, *U.S. Army World War II Corps Commanders: A Composite Biography* (Fort Leavenworth, KS: U.S. Army Command and General Staff College, Combat Studies Institute, 1989), 9.

⁷⁵ "A division is the basic large unit of the combined arms. It comprises a headquarters, infantry (cavalry) (armored) units, field artillery units, and certain troops of other arms and services. It is an administrative as well as a tactical unit." United States War Department, *Field Service Regulations United States Army 1941* (Washington, DC: Washington Government Printing Office, 1941), 2-3.

control measures, and an absent unity of effort. Although groups of the 82nd Airborne Division achieved tactical success, there was no evidence that indicated that Ridgway linked tactics to strategic ends or had an adequate visualization of operations.

There is sufficient evidence to support this claim beginning with the comprehensive report of operations from the 82nd Airborne Division Headquarters published in 1945, accounting the division's experiences in Sicily and Italy. A key fact in that report was the mission as issued by II Corps to the 82nd Airborne Division for its 505th PIR. The mission stated:

“(1) Land during the night D-1/D in area N and E of Gela, capture and secure high ground in that area; (2) disrupt communications and movement of reserves during night; (3) be attached to 1st Infantry Division effective H+1 hours on D-Day; and (4) assist 1st Infantry Division in capturing and securing landing field at Ponte Olivo.”⁷⁶

The mission for the remainder of the 82nd Airborne division, was to “(a)...concentrate rapidly by successive air lifts in Sicily by D+7, in either or both the DIME (45th Infantry Division) or JOSS (3rd Infantry Division) areas..., and (b) 2nd Battalion, 509th Parachute Infantry remain in North Africa in reserve, available for drop mission as directed.”⁷⁷

The report also contained an after action report (AAR) provided by the 505th Parachute Infantry Regimental Commander, Colonel James M. Gavin, submitted to General Ridgway a month after the airborne assault operations. In that AAR, Gavin cited the 82nd Airborne Division's mission in simple terms, as “the mission of securing the amphibious landing of the 1st Division in Sicily by establishing an airborne bridgehead.”⁷⁸ Military objectives mentioned in the report included tactical tasks such as “attack and overcome an enemy strong point... establish and defend road blocks...[and] the demolition of rail and road crossings of the Acate River.”⁷⁹ Gavin's AAR cited the method of accomplishing this mission as

⁷⁶ 82d Airborne Division, “82d Airborne Division in Sicily and Italy,” Report of Operations, Preface signed by T. B. Ketterson, Division Historian, [n.p.] 1945; Box 6; 82d Airborne Division Documents; Pre. Acc. Collection; Dwight D. Eisenhower Library, Abilene, KS. 5.

⁷⁷ 82d Airborne Division, “82d Airborne Division in Sicily and Italy,” 5.

⁷⁸ Ibid., 26.

⁷⁹ Ibid., 5.

“a parachute combat team to seize and hold the road net[work] and surrounding terrain running from Catagirone to the sea.” These ways of airborne insertion required significant means in addition to the parachute combat team.

Ridgway knew that he needed more resources than the division controlled and he fought for them. When forced to share the available troop carrier planes with British Airborne Forces, Ridgway argued bitterly with British Commander Boy Browning over control of the allocations. Although Ridgway received full support from General George Patton for all of the troop carriers, ultimately General Eisenhower decided that Ridgway received 250 of the C-47s (69%) and Browning received 110 C-47s (31%). Therefore, Ridgway only had enough planes to drop one regimental combat team reinforced with a battalion from the other, rather than dropping two full regiments as intended.⁸⁰ As a result, the 82nd Airborne Division was piecemealed into various assault positions to hold high ground. Only one Parachute Infantry Regiment (PIR), the 505th, jumped the first night of Operation HUSKY. In that jump, paratroopers were scattered beyond the designated drop zones and interspersed with the 1st Infantry Division’s lines on the ground. The Headquarters Command Serial was dropped “thirty miles from its assigned Drop Zone,” the first battalion serial was dropped “fifty miles East of Gela [its assigned drop zone],” and the second battalion serial dropped forty kilometers [over 24 miles] from the scheduled drop zone.”⁸¹ On the second night, the 504th PIR jumped, similarly scattered outside the designated drop zone. Had Ridgway received all 360 troop carriers, there still was not enough to employ the third of the 82nd Airborne Division’s three regiments, its glider regiment, which remained in Tunisia as a reserve force intended for later “drop missions as directed.”⁸² However, the shortage of troop carrier planes was not Ridgway’s only resource shortfall.

⁸⁰ Clay Blair, *Ridgway’s Paratroopers* (Garden City, NY: Dial Press, 1985), 74-75.

⁸¹ 82d Airborne Division, “82d Airborne Division in Sicily and Italy,” 23.

⁸² *Ibid.*, 5.

Among Ridgway's many concerns were ensuring "adequate night fighter protection for the troop carriers."⁸³ The Northwest African Tactical Air Force (NATAF) denied Ridgway's request for more troop transports because, as he was told, "other missions were of greater importance."⁸⁴ Ridgway was concerned that "naval representatives ... refused to provide a definite corridor for any airborne mission after D-Day."⁸⁵ Ridgway understood the refusal meant that, "unless a clear aerial corridor into Sicily could be provided, no subsequent airborne troop movement could be made after D-Day."⁸⁶

Another contributing factor to Ridgway's failure at the operational level is that, not only did he not make the jump with any of the airborne assault forces, but also he was not personally present with the 82nd Division.⁸⁷ Ridgway was afloat on General George S. Patton's Seventh Army command vessel, the *Monrovia* since July 4th (D-5).⁸⁸ Since Ridgway was aboard a ship and away from two thirds of his organization in Tunisia, Ridgway was, as author Julian Burns correctly concluded, "...out of contact with his forces, [and therefore] he was out of command."⁸⁹

In evaluating Ridgway's performance as an operational commander, he violated all eleven elements of operational art required for commander's visualization. There is no evidence to suggest that Ridgway considered a center of gravity as the source of power that provided moral or physical strength. Since there is no center of gravity, there is also no manner in applying combat power against that COG either directly or indirectly.

The 82nd Airborne division culminated immediately upon its scattered drops such as with the 504th PIR where "only 400 of the regiment's 1600 men (25%) had reached the regimental area [drop

⁸³ Albert N. Garland, et al., *Sicily and the Surrender of Italy* (Washington, DC: Government Printing Office, 1965), 101-102.

⁸⁴ Ibid.

⁸⁵ Ibid., 176.

⁸⁶ Ibid., 176.

⁸⁷ Ridgway, *Soldier*, 70.

⁸⁸ 82d Airborne Division, "82d Airborne Division in Sicily and Italy," 6.

⁸⁹ Julian H. Burns, Jr., "The Education of Matthew Ridgway in Generalship" (monograph, U.S. Army War College, Carlisle Barracks, PA. 1989), 17.

zone].”⁹⁰ A total of 5,733 men of the 82nd Airborne Division were employed in the Sicily Campaign of which there were a total of 964 casualties (16.8%) of which 190 of those casualties were killed in action, 6 died of wounds, 172 were prisoners of war, 48 were missing in action, 73 missing and later returned, and 575 wounded.⁹¹ Risking those lives of lightly equipped paratroopers inserted into combat against German Panzer Divisions – an enormous cost in common military terms of American blood and treasure – provided little in terms of decisive results or conditions set toward a desired end state.

Since so many elements of the regiments were isolated and forced to attach themselves to Canadian or Seventh Army Forces, there was no evidence of a decisive point or a key event that contributed materially to success. Although it is reasonable to suggest that Ridgway would have known the strategic importance of invading Italy – he received planning guidance directly from General Marshall⁹² – there was no mention of purpose in the mission statements, nor was there a description of a desired future condition that the commander wanted to exist at the conclusion of operations. Historian Carlo D’Este concluded, “Most of Gavin’s men were not even aware their destination that night was Sicily until moments before take-off from Tunisia.”⁹³ Since there was no clear endstate, there also was no linkage of the tactical objectives to that endstate or lines of effort. The division elements on the ground later procured transportation and relied on a single basic load of ammunition for the remainder of the campaign, and at one point the 505th PIR “marched continuously [one] day without food or water ...a distance of 23 miles,” because the 82nd Airborne Division maintained its emergency stockpile of supplies in Africa.⁹⁴

Although the Sicilian campaign contained two planned phases with the sequential drops and differencing missions for the two participating regiments, there was no advantage gained with this phasing. Had the entire division jumped concentrated at a decisive point in a combined effort with

⁹⁰ 82d Airborne Division, “82d Airborne Division in Sicily and Italy,” 37.

⁹¹ Ibid., 39.

⁹² Ridgway, *Soldier*, 59.

⁹³ Carlo D’Este, *Bitter Victory, The Battle For Sicily, 1943*, (New York, NY: E.P. Dutton, 1988), 238.

⁹⁴ 82d Airborne Division, “82d Airborne Division in Sicily and Italy,” 14-16.

offensive ground forces, the element of simultaneity and depth might have overwhelmed the enemy and achieved lasting effects. Although General Ridgway received congratulatory remarks from his higher headquarters for the “remarkably rapid and successful conclusion of the mission assigned ... to capture Palermo,” there is no evidence that Ridgway planned or envisioned this incidental tempo prior to execution.⁹⁵

“That jump,” as Ridgway proclaimed, “developed into one of the tragic errors of World War II.”⁹⁶ An error that might have been avoided had the totality of the 82d Airborne Division’s maneuvers and battles been directed toward achieving a common goal as Svechin’s theory of operational art suggested.⁹⁷ Additionally, the 82nd Airborne Division’s employment in HUSKY violated several doctrines of combat that Ridgway should have had knowledge of because *Army Field Service Regulations* of 1941 prescribed them. These were “ultimate objective, simple and direct plans, unity of effort, and concentration.”⁹⁸ Many of these problems might have been avoided had the operation been rehearsed as the regulations outlined including “joint training by the combined arms detailed to participate in the operation.”⁹⁹ Operation HUSKY caused Ridgway to relearn these doctrines through the “sad bitter lesson,” of the loss of planes and men that the lack of unity of effort caused.¹⁰⁰

In his memoirs, Ridgway stated, “nervous and excited gunners, who had just been under heavy attack, forgot that friendly planes [the airborne assault force] were to be in the air at that hour, and continued firing in the belief that our transports were enemy bombers making another pass at them.”¹⁰¹ Intuitively, Ridgway understood the importance of air corridors, pressed for them, did the best he could

⁹⁵ 82d Airborne Division, “82d Airborne Division in Sicily and Italy,” 18. “In five days of campaigning ...advanced more than one hundred miles through enemy territory and took prisoner...a total of 23,191 officers and men.”

⁹⁶ Ridgway, *Soldier*, 73.

⁹⁷ For more discussion on Svechin, see Appendix C.

⁹⁸ War Department, *Field Service Regulations United States Army, 1941*, 23.

⁹⁹ *Ibid.*, 245.

¹⁰⁰ Ridgway, *Soldier*, 73.

¹⁰¹ *Ibid.*

when denied the corridors, and strived never to repeat the error again. Because Ridgway learned to understand, he started to recognize when resources and conditions were inadequate. He later successfully prevented what would have been a disaster had the division jumped as planned into Rome.¹⁰²

Ridgway learned another important lesson. He was never away from his paratroopers during combat again. In future operations, he would put himself all the way forward. Ridgway said that advanced elements would stop moving forward once they came under fire. Therefore, he determined “the best way to keep them moving was to be right there with them, moving with the point of the advanced guard...”¹⁰³ Ridgway maintained this lead from the front leadership style the remainder of his career. For the next airborne operation, Ridgway jumped with his paratroopers.¹⁰⁴

Operation NEPTUNE

Even though General Matthew Ridgway jumped into Normandy during Operation NEPTUNE and into direct combat action with the 82nd Airborne Division, he was still unable to command his organization effectively. In his memoirs, Ridgway wrote, “There was little I could do during that first day toward exercising division control. I could only be where the fighting seemed the hottest, to exercise whatever personal influence I could on the battalion commanders.”¹⁰⁵ Similar to Operation HUSKY, the 82nd Airborne Division achieved limited tactical success in Operation NEPTUNE, but once again, Ridgway experienced failure at the operational level because he did not link tactics to strategic ends. Nor did he develop an adequate visualization of operations. In Ridgway’s second trial in combat, his skill, knowledge and experience, for employing airborne forces improved but still resulted in an inadequate application of operational art.

¹⁰² Ridgway, *Soldier*, 80.

¹⁰³ Ibid., 74.

¹⁰⁴ 82nd Airborne Division, Report of operations, "Operation Neptune" at Normandy, June 6 - July 8, 1944; U.S. Army Unit Records, Box 1, 82nd Airborne Division in Normandy France-Operation Neptune; Dwight D. Eisenhower Library, Abilene, KS.

¹⁰⁵ Ridgway, *Soldier*, 10.

An order from the Supreme Headquarters Allied Expeditionary Force (SHAEF), dated 10 March 1944, to the 21st Army Group Commander clearly outlined the object of Operation OVERLORD, the comprehensive invasion operation that included NEPTUNE as an amphibious component. The end state was “to secure a lodgment area on the continent from which further offensive operations can be developed.”¹⁰⁶ The conditions listed required that the lodgment “contain sufficient port facilities to maintain a force of some twenty-six to thirty divisions, and enable that force to be augmented by follow-up shipments.”¹⁰⁷ There is evidence that Ridgway understood this strategic endstate and these conditions sought for the European invasion because four months later, he justified the decisions of the Supreme Command, and the employment of airborne forces during operation NEPTUNE, in a memorandum he sent to SHAEF on 25 July 1944.¹⁰⁸

By the point when the SHAEF end state and conditions filtered down three levels to the 82nd Airborne Division, Ridgway’s mission statement contained five tactical tasks and omitted any requirement for him to visualize the nature and design of operations. An 82nd Airborne Division report of operations cited the mission received from First Army as:

“Land by parachute and glider before and after dawn of D-Day astride the Merderet River, seize, clear and secure the general area [eight geographical coordinates] within its zone; capture St. Mere Eglise; seize and secure the crossings of the Merderet River at [two geographical coordinates] and a bridgehead covering them, with MLR along the general line [five geographical coordinates]; seize and destroy the crossings of the Douve River at Beuzeville Las Bastille and Etienville; protect the northwest flank of the VII Corps within the Division zone; and be prepared to advance west on Corps order to the line of the Douve north of its junction with the Prairies Marcageuses.”¹⁰⁹

At the tactical level, the 82nd Airborne Division achieved success. On 10 July 1944, at the conclusion of the Normandy operations and after 53 days of front line battle, General Ridgway reported that the 82nd

¹⁰⁶ Supreme Headquarters Allied Expeditionary Force, “Operation OVERLORD,” order stamped “BIGOT,” signed by W. B. Smith, 10 March, 1944; Digital Collections, World War II Operational Documents; Combined Arms Research Library; U.S. Army Command and General Staff College, Fort Leavenworth, KS., 1.

¹⁰⁷ Ibid.

¹⁰⁸ Ibid., 3.

¹⁰⁹ 82d Airborne Division, “Report of Operation NEPTUNE,” no date; Digital Collections, World War II Operational Documents; Combined Arms Research Library; U.S. Army Command and General Staff College, Fort Leavenworth, KS., 2.

Airborne division had “accomplished every mission on or ahead of orders; had decisively beaten all enemy forces opposing it; [and] had never lost ground gained.”¹¹⁰ However, this success, centered on the tactical tasks of securing four key crossing sites over the Merderet River, came at a tremendous cost. In the same one-page report, Ridgway accounted that the division sustained 5,363 casualties from a committed force of 11,657 paratroopers (46%). Of those 5,363 casualties, 778 (15%) were killed in action, 3,373 (63%) were evacuated wounded, another nine (less than .01%) were simply missing in action, and perhaps most significantly, 1,203 (22%) were missing in action from the initial airborne assault landings.¹¹¹

In spite of such losses, and Ridgway’s accompanying passionate declaration that the division held “a fighting spirit higher than ever,” the division was culminated and incapable of further operations.¹¹² Ridgway should have visualized the nature and design of operations above the tactical level. In evaluating Ridgway’s performance at the operational level, he violated the operational art element of culmination as well as seven other of the eleven elements required for commander’s visualization.

The following passage is representative of Ridgway’s circumstances after the jump:

“The dawn of D plus 1 confronted the 82d Airborne Division with the unsolved problems of the day before. The la Fiere bridge and Ste. Mere- Eglise remained the critical areas in the western sector. Until 0900 the division continued to be out of touch with higher headquarters. D-Day had left all of the division units hard-pressed, and General Ridgway’s primary concern was in the arrival of expected tank and infantry reinforcements. At the close of the day, he had reported his position, his losses in men and materiel, and his need for artillery, antitank guns, ammunition, and medical supplies. He had stated that he was prepared to continue his mission when reinforcements came. But the communication was one-way and General Ridgway did not even know whether his messages got through.”¹¹³

¹¹⁰ 82d Airborne Division, “Report of Normandy Operations,” signed by Matthew B. Ridgway, 10 July 1944; Box 98; Crusade in Europe Documents; Eisenhower, Dwight D.: Papers, Pre-Presidential, 1916-1952; Dwight D. Eisenhower Library, Abilene, KS.

¹¹¹ Ibid.

¹¹² Ibid.

¹¹³ Department of the Army, *Utah Beach to Cherbourg*, American Forces in Action Series, Center Of Military History Website (Washington, DC: Government Printing Office, 1948), 61.
<http://www.history.army.mil/BOOKS/WWII/utah/utah4.htm> (accessed December 28, 2010).

The 82nd Airborne Division did not have sufficient operational reach. An 82nd Airborne Division administrative order for supply for Operation NEPTUNE articulated the supplies in type and quantity carried by airborne and seaborne troops such as “one ‘K’ and two ‘D’ rations.”¹¹⁴ However, it did not discuss supply replenishment for where, when, or from whom 82nd troopers received more rations or any other supply commodity. The same order stated “none in combat” in terms of replacement personnel. The AAR mentioned only one aerial resupply mission and that “a small amount of equipment and supplies were received later by glider.”¹¹⁵

Although the 82nd Airborne Division employed its assets in three approaches – three PIRs by parachute, a regiment by glider and supporting enablers by sea – there is no evidence to suggest that Ridgway visualized a center of gravity, or that he arranged operations directly or indirectly against that center of gravity. Nor did the three approach methods link the tactical objectives to the endstate as operational art lines of operation, or effort, require. If Ridgway visualized any phasing or transition, he failed to achieve it. The culminated division without operational reach was not, as was its mission to be, “prepared to advance west on Corps order to the line of the Douve...”¹¹⁶

Ridgway also lost the tempo that airborne forces inherently provided to operations as the *Army Field Service Regulations* prescribed in 1941.¹¹⁷ After jumping with the lead parachute forces, Ridgway was out of radio contact for thirty-six hours. His subordinate units, much like in Sicily, again executed plans based on pre-jump rehearsals rather than through real time control by the division command post.¹¹⁸

Ridgway did not achieve the decisive point of this operation, which was inserting the airborne parachute and glider forces on their designated drop zones. Only the 505th PIR “landed generally in the

¹¹⁴ 82d Airborne Division, Administrative Order No. 1 to Accompany Field Order No. 6, 12 May 1944; Digital Collections, World War II Operational Documents; Combined Arms Research Library; U.S. Army Command and General Staff College, Fort Leavenworth, KS., 2.

¹¹⁵ 82d Airborne Division, “Report of Operation NEPTUNE,” 4.

¹¹⁶ Ibid., 2.

¹¹⁷ War Department, *Field Manual (FM) 100-5, Field Service Regulations, Operations* (Washington, DC: U.S. Government Printing Office, 22 May 1941), 24.

¹¹⁸ Mitchell, *Ridgway*, 42.

vicinity of its drop zone,” while the 507th and 508th PIRs as well as the gliders were as “scattered” due to enemy reaction.¹¹⁹

There was however, some operational success above the tactical success. Because the 82nd Airborne Division’s forces were so scattered, they incidentally achieved simultaneity and depth against the enemy. This is evident where, “individuals who had been scattered in the landings rejoined their units throughout the day,” and “small groups assembled to form small task forces until such time as the regiment could assemble completely.”¹²⁰ Because “all men were briefed thoroughly on their missions,” prior to the jump, Ridgway created opportunities to defeat the enemy in spite of the risk of potential mission failure that scattering caused.

This evidence demonstrates that Ridgway’s operational art matured slightly, from the Sicily experience that saw near mission failure at enormous cost, to the Normandy experience that saw huge mission accomplishment although still at enormous cost. In Normandy, Ridgway applied three of the eleven elements of operational art where before he had applied none. The Army recognized Ridgway’s tactical achievements and immediately placed Ridgway in command of the newly created XVIII Airborne

¹¹⁹ Mitchell, *Ridgway*, 5.

¹²⁰ Ibid.

Corps. Ridgway now commanded a larger organization consisting of three airborne divisions.¹²¹ Along with his former 82nd, the corps included the 101st and the 17th Airborne Divisions.

Operation MARKET

General Matthew Ridgway had little opportunity to apply operation art in the first test of the XVIII Airborne Corps during Operation MARKET in Holland in September 1944. Only two of the three corps divisions participated in the Holland campaign, the 82nd and 101st Airborne Divisions, and both were “detached and placed under British operational control.”¹²² Ridgway’s command relationship, and equally imperative, his planning responsibilities, were relegated to merely administrative in nature. Ridgway could do little more than observe his two participating divisions but he continued learning from the experience.

First Allied Airborne Army clearly provided the end state and conditions required. Operation MARKET facilitated the strategic drive into Germany and exploited the withdrawing enemy.¹²³ The mission statements of the two divisions were similar and tactically focused. The 82nd Airborne Division

¹²¹ “The corps commander is responsible to the army commander for combat operations and certain service functions. As a part of an army, the corps has few service functions. The corps commander estimates the over-all service requirements for an operation and, as necessary, requests the allotment of additional means to the corps. When combat or administrative means organic to divisions and corps troops are not sufficient, he allots to them such additional means as are required and are available. Also, when there is a shortage of other support means, he allots to divisions and corps troops such means as are available. He normally controls the allocation of ammunition and may control the allocation of any item requiring his control. When the corps is detached from the army, for combat or other operations, it becomes a self-contained unit and must operate the service installations necessary for the administrative support of the entire corps. In such a situation, it normally must be reinforced by the assignment or attachment of additional service units, and the corps staff requires augmentation. The corps commander ordinarily issues his orders as instructions which specify the missions of the divisions and corps troops. He leaves the method and details of execution to the subordinate commanders. In battle he coordinates the action of his divisions, determines the employment of corps troops, and employs the corps reserve in accordance with the requirements of the situation. He influences the action by changes in disposition, use of his reserves, use of the corps artillery, allocation of logistical support, and by recommending missions for supporting tactical aviation.” United States War Department, Field Manual (FM) 100-15, *Field Service Regulations, Larger Units* (Washington, DC: Government Printing Office, 1950), 62.

¹²² XVIII Corps (Airborne), “Operation MARKET, Airborne Phase, D to D Plus Ten, Inclusive,” signed by M. B. Ridgway, 04 December 1944; Digital Collections, World War II Operational Documents; Combined Arms Research Library; U.S. Army Command and General Staff College, Fort Leavenworth, KS., 1.

¹²³ First Allied Airborne Army, “Narrative of Operations in Holland,” signed by Robert C. Angell, Unit Historian, 9 October 1944; Digital Collections, World War II Operational Documents; Combined Arms Research Library; U.S. Army Command and General Staff College, Fort Leavenworth, KS., 1.

was to “land by parachute and glider commencing D Day S of Nijmegen; seize and hold the highway bridges across the Maas River at Graves and the Waal River at Nijmegen; seize, organize, and hold the high ground between Nijmegen and Groesbeek; deny the roads in the Division area to the enemy; and dominate the area shown on operations overlay, annex 3.”¹²⁴ The 101st Airborne Division Mission was to “land units in the general area S of Uden, seize and hold highway crossings near Neerpelt, Valkenswaard, Eindhoven, Son, St. Oedenrode, Veghel, and Uden, and insure the advantage of the Second British Army.”¹²⁵ These missions to capture bridges and roads were essential to creating the conditions required and by D+3 the divisions accomplished their missions.¹²⁶

The Holland operation required extensive operational reach. Both airborne divisions, along with the British 1st Airborne, departed for the jump from England. The 101st Airborne Division was “transported in 424 U.S. parachute aircraft and 70 American gliders.”¹²⁷ The first echelons of the 82nd Airborne Division arrived in “480 U.S. parachute aircraft and 50 American gliders.”¹²⁸ Ensuring adequate operational reach, the airlift included sufficient fighter support for escort and drop zone coverage as well as bombers over enemy positions.¹²⁹ Additionally “two hundred forty-six [B-24s] dropped 782 tons [of supplies] with good to excellent results,” also ensured operational reach on D+1 (later supply drops fell into enemy hands due to poor visibility during unfavorable weather).¹³⁰

Ridgway sent a report of operations to Lieutenant General Brereton, Commanding General of First Allied Airborne Army, in December 1944 in which Ridgway discusses the element of risk in

¹²⁴ 82nd Airborne Division, “Field Order No. 11” 13 September 1944; Digital Collections, World War II Operational Documents; Combined Arms Research Library; U.S. Army Command and General Staff College, Fort Leavenworth, KS., 1.

¹²⁵ Ibid.

¹²⁶ First Allied Airborne Army, “Narrative of Operations in Holland,” 25.

¹²⁷ Ibid., 4.

¹²⁸ Ibid.

¹²⁹ H. H. Arnold memorandum to Commanding General, Command and General Staff School, 4 November 1945; Digital Collections, World War II Operational Documents; Combined Arms Research Library; U.S. Army Command and General Staff College, Fort Leavenworth, KS., 5.

¹³⁰ First Allied Airborne Army, “Narrative of Operations in Holland,” 8-10.

creating and maintaining the conditions necessary to achieve decisive results. Ridgway observed in Holland, the first airborne operations conducted in daylight, which was divergent from the nighttime method previously conducted in Sicily and Normandy. For reasons of less dispersion, quicker troop assembly, and less training required, Ridgway concluded with leveraging the effective allied air superiority, “a daylight airborne operation presents decided advantage over the same operation conducted at night.”¹³¹ The decision to jump in daylight was a decisive point because it allowed for greater drop accuracy over the drop zones.

That accuracy prevented culmination. Where the Normandy jump suffered a high 46% casualty rate, the Holland jump suffered far lower rate. The 82nd Airborne Division suffered 1,637 casualties (inclusive of KIA, WIA or MIA) of 11,397 committed troops (13.9%) while the 101st Airborne Division experienced 2,034 casualties of 12,767 committed troops (15.2%).¹³²

Ridgway also observed a decisive point that justified the risk of employing airborne forces. During the planning for MARKET, the “enemy was engaged in a hasty and somewhat disorganized withdrawal under powerful Allied pressure...enemy command had been badly shattered, and his control severely crippled.”¹³³ The simultaneous drops of the airborne divisions into the depth of the German defenses overwhelmed the enemy’s forces and their will to resist.

Ridgway’s XVIII Airborne Corps forces planned an operation that considered six of the eleven elements of operational art and Ridgway’s operational art matured. However, Ridgway did not yet consider several other elements. There was no consideration to determining the enemy center of gravity as a source of moral or physical strength, nor were there any direct or indirect approaches in contending against that identified center of gravity. The plan lacked any significant phasing or transitions or developed lines of operations. Additionally, any tempo attained with an airborne troop insertion was lost,

¹³¹ XVIII Corps (Airborne), “Operation MARKET, Airborne Phase, D to D Plus Ten, Inclusive,” signed by M. B. Ridgway, 04 December 1944; Digital Collections, World War II Operational Documents; Combined Arms Research Library; U.S. Army Command and General Staff College, Fort Leavenworth, KS., 2.

¹³² First Allied Airborne Army, “Narrative of Operations in Holland,” 22-24.

¹³³ XVIII Corps (Airborne), “Operation MARKET, Airborne Phase, D to D Plus Ten, Inclusive,” 5.

as the airborne troops became simply ground troops when the British Second Army failed to reinforced them.

The progressive application of the elements of operational art in Operations HUSKY, NEPTUNE and MARKET demonstrated that General Ridgway's visualization ability continued developing. Ridgway's unintended failure in adequately applying operational art prevented these operations from achieving improved efficiency at the cost of Allied troops, time and resources. As a division and corps commander, General Ridgway fought more initially as a tactical-level commander rather than at the operational-level. If Ridgway had created campaigns by arrainging tactical battles in sequence enabled by better visualization, he would have generated the conditions sought in the desired strategic end state.¹³⁴ He would have done so better and sooner. Ridgway learned from failure. For Ridgway's fourth and fifth sequential combat operations in WWII, the growing presence of the eleven elements of operational art indicate that Ridgway started to master operational art.

The Maturation of General Ridgway's Operational Art -- Elements of Operational Art	HUSKY Sicily 82nd Div	NEPTUNE Normandy 82nd Div	MARKET Eindhoven XVIII Corps
Center of Gravity	NO	NO	NO
Culmination	NO	NO	YES
Decisive Points	NO	NO	YES
Direct / Indirect Approach	NO	NO	NO
Endstate and Conditions	NO	YES	YES
Lines of Operation /Effort	NO	NO	NO
Operational Reach	NO	NO	YES
Phasing and Transitions	NO	NO	NO
Simultaneity and Depth	NO	YES	YES
Risk	NO	YES	YES
Tempo	NO	NO	NO
ANALYSIS	0 / 11	3 / 11	6 / 11

Figure 2. Ridgway's Operational Art at Operations HUSKY, NEPTUNE and MARKET (author created).

¹³⁴ For more discussion on campaigns, see U.S. Army, *FM 3-0, Change 1*, 7-12.

RIDGWAY MASTERED OPERATIONAL ART

The XVIII Airborne Corps, under Ridgway's command, fought in the Battle of the Bulge in the Ardennes Forrest and at Operation VARSITY along the Rhine River in Germany. At the Bulge, nine of the eleven elements of operational art were present in the operations. At VARSITY, all eleven elements were present. The knowledge from Ridgway's education, skills gained from his training, and lessons learned from his earlier combat experience complemented each other in a compounding effect. At the Bulge, Ridgway's visualization matured.

Battle of the Bulge

General Matthew Ridgway learned a great deal from the shortcomings of Operation MARKET and applied operational art significantly better in the Ardennes Forest at the Battle of the Bulge from 18 December 1944 to 14 February 1945. As Ridgway's skill increased, so did his responsibilities. In those weeks, the XVIII Airborne Corps employed an often-changing task organization comprised of ten divisions consisting of nearly 97,000 soldiers.¹³⁵ In the Bulge, Ridgway visualized and designed an operation that consisted of defensive operations along with offensive operations and incorporated nine of the eleven elements of operational art.

General Walter Bedell Smith, SHAEF Chief of Staff, said that Eisenhower correctly estimated the situation, when the Germans "pushed three full armies into the Ardennes," as, the Germans "risking all of their reserves."¹³⁶ On 16 December 1944, the 7th Armored Division held the town of St. Vith with elements of the 106th and 28th Infantry Divisions and 9th Armored Division holding territory directly

¹³⁵ XVIII Corps (Airborne), "Summary of Operations 18 December 1944 to 13 February 1945," signed by M. B. Ridgway, 1 March 1945; Digital Collections, World War II Operational Documents; Combined Arms Research Library; U.S. Army Command and General Staff College, Fort Leavenworth, KS., 2. Task organization included the 82nd Airborne, 1st, 30th, 75th, 84th, 99th, 106th Infantry Divisions, 3d, 7th, and the 9th Armored Divisions.

¹³⁶ Walter Bedell Smith, *Eisenhower's Six Great Decisions, Europe 1944-1945* (New York, NY: Longmans, Green and Co., 1956), 94.

south that appeared to “bulge” eastward from the Allied front lines.¹³⁷ On 17 December, German Sixth Panzer Army enveloped these elements. Instead of invading enemy held territory with an airborne force insertion, SHAEF ordered the XVIII Airborne Corps on short notice to fly from England to Reims, France, then move by truck to Bastogne and reinforce allied defenses under the First U.S. Army against the German attack.¹³⁸ Ridgway promptly moved the 82nd and 101st Airborne Divisions to the Ardennes expecting the 17th Airborne Division as soon as possible afterwards.¹³⁹ Without the benefit of pre-planned orders, Ridgway’s assigned mission arrived in the form of “oral instructions,” from General Courtney Hodges, Commander, First U.S. Army, for Ridgway “personally to do everything in [his] power to get these divisions out of their bivouacs and into combat fast.”¹⁴⁰ Ridgway’s “power” in this instance was his benefit of his experiential learning that enabled him to visualize how the operations should unfold.

In his first three combat operations, Ridgway had not considered phasing and transitions. In the Ardennes, it was his most prominent operational art element. Ridgway visualized a plan through nine sequential maneuvers that he described in terms of a concentration, an attack, a relief-in-place, a withdrawal, an active defense, an attack, a regrouping, another attack, seizing key terrain, another relief, and a movement to contact.¹⁴¹ In the first operational phase, between 20 and 23 December, the XVIII Airborne Corps concentrated its forces having assumed command of various divisions already committed to repelling German forces attacking westward and maintaining an allied defensive line. In addition to the

¹³⁷ XVIII Corps (Airborne), *Mission Accomplished, A Summary of Military Operations of The XVIII Corps (Airborne) in the European Theater of Operations, 1944-1945* (Schwerin, Germany, Published by the XVIII Corps (Airborne), 11 September 1945), 6.

¹³⁸ XVIII Corps (Airborne), “Summary of Operations 18 December 1944 to 13 February 1945,” signed by M. B. Ridgway, 1 March 1945; Digital Collections, World War II Operational Documents; Combined Arms Research Library; U.S. Army Command and General Staff College, Fort Leavenworth, KS., 1.

¹³⁹ Ridgway, *Soldier*, 112.

¹⁴⁰ *Ibid.*, 113.

¹⁴¹ XVIII Corps (Airborne), “Summary of Operations 18 December 1944 to 13 February 1945,” 1: Current Army doctrine divides these tasks into defensive operations of area defense, mobile defense and retrograde; and offensive operations of movement to contact, attack, exploitation and pursuit. For more information, see FM 3-0, *Operations* 2008, C1, Paragraphs 3-30 and 3-46.

habitual command of the 82nd Airborne, the corps controlled the 7th Armored along with the 30th, 84th, 106th, and 28th Infantry Divisions. The 30th Infantry, the 82nd Airborne, and 7th Armored comprised the front line in the corps sector.¹⁴² With the 82nd Airborne screening, the XVIII Airborne Corp conducted a withdrawal of the 7th Armored, the 28th and 106th Infantry Divisions “with all their attached units intact, a force of approximately fifteen thousand, and with all their supplies and equipment, marked the successful completion of the initial operation of the XVIII Corps (Airborne).”¹⁴³ By the end of December, the 82nd Airborne and the 30th held the line, “every attack was repulsed,” and the XVIII Airborne Corps prepared for attack. In the second operational phase, between 3 and 10 January, the 82nd Airborne the 75th and 30th Infantry Divisions, with 7th Armored Division in corps reserve (later switched with the 82nd Airborne), conducted a three-pronged attack southward against defending German forces.¹⁴⁴ In the third operational phase, between 28 January and 5 February the 1st Infantry and 82nd Airborne Divisions, exploited success and changed direction with a two-prong attack eastward toward the Siegfried Line fortifications.¹⁴⁵

In addition to the element of phasing and transitions, there were several other firsts for Ridgway. For the first time, Ridgway applied his forces in a direct approach in contending with the operational center of gravity that the XVIII Airborne Corps faced. Initially, while the allies were defending, the German Army’s source of strength that enabled its freedom of action was the Sixth Panzer Army with its three corps of “overwhelming superiority of men and materiel.”¹⁴⁶ Later, after XVIII Airborne Corps advances successfully recaptured St. Vith, Ridgway attacked what served as the German Army’s new center of gravity, the fortifications of the Siegfried Line.¹⁴⁷

¹⁴² XVIII Corps (Airborne), *Mission Accomplished*, 11.

¹⁴³ XVIII Corps (Airborne), “Operation Report Ardennes, 19 December 1944 to 13 February 1945,” signed by M. B. Ridgway, 1 March 1945; Digital Collections, World War II Operational Documents; Combined Arms Research Library; U.S. Army Command and General Staff College, Fort Leavenworth, KS., 4.

¹⁴⁴ XVIII Corps (Airborne), *Mission Accomplished*, 11.

¹⁴⁵ *Ibid.*, 13.

¹⁴⁶ *Ibid.*, 7.

¹⁴⁷ XVIII Corps (Airborne), “Operation Report Ardennes,” 10.

Also for the first time, Ridgway commanded armored forces in addition to the airborne and light infantry divisions already familiar to him. The XVIII Airborne Corps had such sufficient force structure with as many as seven divisions for most of the attack, that Ridgway rotated divisions into reserve and prevented culmination. The force structure also enabled Ridgway to design the operation adhering to the elements of simultaneity and depth. On 25 January, the XVIII Airborne Corps received orders for “a new Corps attack ... changing direction to the northeast...to provide a powerful attack on a narrow front, in great depth ...[as] a sustained advance by successive attacks by rested divisions abreast.”¹⁴⁸ The sufficient force size with rotating reserve divisions did more than overwhelmed the enemy and prevent XVIII Airborne Corps culmination. The force gave Ridgway the operational reach necessary to gain a marked advantage materially in achieving success decisively.

There were three decisive points of the operation. First, the timely response of the XVIII Airborne Corps in becoming operational less than 34 hours after alert, proved decisive to denying the enemy further advances into friendly territory. Secondly, Ridgway’s decision to withdraw the 7th Armored Division at the urgent request of its Commanding General, Brigadier General R. W. Hasbrouck, prevented German interdiction to the 7th Armored Division’s supply lines and that division’s culmination inside the pincer envelopment of the German counter-offensive from 17 December.¹⁴⁹ The third decisive point was regaining the initiative and exploiting success over an overwhelmed enemy thus allowing the recapture of St. Vith on 23 January and its road network that was critical to German resupply.¹⁵⁰

On 17 January, Ridgway demonstrated ability to balance risk with opportunity. After careful assessment of the 75th Infantry Division’s seizure of the city of Vielsalm, Ridgway issued orders to the division for “exploiting the advantage gained over the enemy.”¹⁵¹ Ridgway called the commanding general of the 75th Infantry Division, Major General Ray E. Porter, and said,

¹⁴⁸ XVIII Corps (Airborne), “Operation Report Ardennes,” 10.

¹⁴⁹ Hasbrouck to Ridgway, 22 December 1944, XVIII (Airborne) Corps headquarters diary, Ridgway papers, Military History Institute, as cited in Winton, *Corps Commanders of the Bulge*, 255.

¹⁵⁰ XVIII Corps (Airborne), *Mission Accomplished*, 11.

¹⁵¹ XVIII Corps (Airborne), “Operation Report Ardennes,” 9.

“I understand that you are having an extremely favorable condition in your sector. I want that situation exploited to the limit of physical capacity. Push out small groups with automatic weapons fire. Secondly, block passage to the south. This is an opportunity for your division to make a name for itself. Keep me informed.”¹⁵²

The success from that exploitation enabled Ridgway to utilize another operational art element he had not considered until this point. The XVIII Airborne Corps now had tempo.

On 28 January 1945, the XVIII Airborne Corps attacked the Siegfried Line with such a tempo that the corps gained “complete initial surprise.”¹⁵³ Added to the divisions aligned under the command and control of the XVIII Airborne, the 1st Infantry Division attacked alongside the 82nd Airborne. The results were so successful that the 1st Infantry Division “ran over German positions where individuals were found asleep and the 82nd Airborne Division caught the enemy at breakfast.”¹⁵⁴ Ridgway achieved intended tempo for the first time as well as considerable operational success. There were only two operational art elements Ridgway did not consider in the Ardennes.

Since the employment of the XVIII Airborne Corps into the Ardennes was in reaction to the German Counter-offensive, there was no clear end state or desired future conditions expressed that the Ridgway wanted to exist when the Battle of the Bulge ended. Nor were there clear lines of operations that bridged a broad concept of operations across to discreet tactical tasks linking tactical and operational objectives to the end state. However, Ridgway learned enough experientially that by the next pre-planned operations, he visualized his operations with these two operational art elements in mind.

It is interesting to know how the Army appraised General Matthew B. Ridgway’s performance. On 1 February 1945, upon request by Army Chief of Staff General George Marshall, General Dwight Eisenhower as the Supreme Allied Commander - Europe, appraised the performance of 38 general officers serving in the ETO. Ridgway, as the XVIII Airborne Corps Commander, ranked number 16 of 38

¹⁵² 75th Infantry Division, “The 75th Infantry Division in combat: the Battle in the Ardennes, 23 Dec. 1944-27 Jan. 1945: the Colmar Pocket Battle, 30 Jan. 1945-9 Feb. 1945 : the Battle for the Ruhr, 31 Mar. 1945-15 Apr. 1945;” Digital Collections, World War II Operational Documents; Combined Arms Research Library; U.S. Army Command and General Staff College, Fort Leavenworth, KS., 13.

¹⁵³ XVIII Corps (Airborne), *Mission Accomplished*, 13.

¹⁵⁴ XVIII Corps (Airborne), “Operation Report Ardennes,” 11.

generals (top 42% of his peers). In a memo reflecting the rank-ordered list, Eisenhower wrote that he evaluated these officers, “based primarily upon [his] conclusions as to value of services each officer has rendered in this war and only secondarily upon my opinion as to his qualifications for future usefulness.”¹⁵⁵ Eisenhower’s personal comments described Ridgway as “magnetic; courageous; [and a] balanced fighter.”¹⁵⁶ Ridgway matured, not only as a general officer, but also as an operational artist.

Operation VARSITY

General Matthew B. Ridgway’s operational art matured significantly in the 20 months since the disastrous airborne operation on Sicily in July 1943. In this monograph’s fifth sequential appraisal of General Ridgway’s maturation of operational art in WWII, it is apparent that Ridgway adequately visualized the nature of Operation VARSITY by having carefully considered all eleven elements of operational art. In March 1945, Ridgway’s apprenticeship in operational art was nearly complete.

In the XVIII Airborne Corps Summary of Ground Forces Participation in Operation VARSITY, dated 25 April 1945, Ridgway cited receiving guidance directly from the Supreme Commander. In a face-to-face conversation with General Eisenhower on 9 February 1945, Ridgway received orders to plan an airborne corps assault operation east of the Rhine River. The operational end state and its conditions were clear. The Rhine River was the last major defensive line of a disintegrating German Army and it protected the Ruhr region east of the Rhine, which was “the heart of Germany’s industry,” and a center of gravity (COG).¹⁵⁷ The 21st Army Group, which XVIII was subordinate to, intended to “isolate the Ruhr from the rest of Germany and break into the North German Plain.”¹⁵⁸ A critical requirement of the COG was the “hundreds of thousands of enemy troops” protecting the Ruhr. A 21st Army Group report of operations

¹⁵⁵ Dwight D. Eisenhower, letter to George C. Marshall, 01 February 1945; Box 137; Crusade in Europe Documents; Eisenhower, Dwight D.: Papers, Pre-Presidential, 1916-1952; Dwight D. Eisenhower Library, Abilene, KS.

¹⁵⁶ Ibid.

¹⁵⁷ XVIII Corps (Airborne), *Mission Accomplished*, 23.

¹⁵⁸ 21st Army Group, “Notes on the Operations of the 21st Army Group, 6 June 1944 – 5 May 1945,” Digital Collections, World War II Operational Documents; Combined Arms Research Library; U.S. Army Command and General Staff College, Fort Leavenworth, KS., 47.

identified a critical vulnerability to that COG in the system of dykes. The report expressed concern about the dykes that "If these were 'breached, a rise in the water table would result in widespread flooding of the low lying areas on either side of the river. The normal width of 400 - 500 yards might increase to as much as 3 miles."¹⁵⁹ The German front line forces facing the 21st Army Group between the Rhine and the Ruhr area consisted of four parachute and three infantry divisions with another infantry and two panzer divisions in immediate reserve.¹⁶⁰ Understanding all of this, Ridgway then started to visualize integrating ways and means to achieve the ends at a level of warfare between tactics and strategy.

Operationally, Ridgway's visualization was that the XVIII Airborne Corps needed to seize "key terrain to disrupt the hostile defenses, and the rapid establishment of a deep bridgehead by airborne troops with early link up by other river crossing forces."¹⁶¹ Ridgway also visualized that the corps needed to "seal off Wesel," an industrial city east of the Rhine and then be prepared to "exploit eastward."¹⁶² The XVIII Airborne Corps mission statement was "To disrupt the hostile defense of the Rhine in the Wesel sector by the seizure of key terrain by airborne attack, in order to rapidly deepen the bridgehead, facilitate crossing by Second British Army and link-up with Ninth U.S. Army; then be prepared for further offensive action eastward on Second British Army order."¹⁶³ Wesel was key terrain and a driving distance of only 344 miles (554 kilometers) to Berlin. In addition to seizing Wesel and destroying two existing bridges over the Rhine, the XVIII Airborne Corps planned to seize and secure a large area with four objectives of high ground designated as "areas to be held at all cost."¹⁶⁴ The forces aligned under the XVIII Airborne Corps Headquarters for this operation, according to Ridgway, consisted of "[t]he 6th

¹⁵⁹ 21st Army Group, "Notes on the Operations," 47.

¹⁶⁰ Ibid., 49.

¹⁶¹ XVIII Corps (Airborne), "Summary of Ground Forces Participation in Operation VARSITY," signed by Matthew B. Ridgway, 25 April 1945, Digital Collections, World War II Operational Documents; Combined Arms Research Library; U.S. Army Command and General Staff College, Fort Leavenworth, KS., 11.

¹⁶² Ibid., 2.

¹⁶³ Ibid.

¹⁶⁴ XVIII Corps (Airborne), "Report on Operation VARSITY," signed by Matthew B. Ridgway, 25 April 1945, Digital Collections, World War II Operational Documents; Combined Arms Research Library; U.S. Army Command and General Staff College, Fort Leavenworth, KS., Sketch No 1.

British and the 13th and 17th U.S. Airborne Divisions.”¹⁶⁵ However, the 13th Airborne Division – which had only recently arrived on the continent and not yet seen combat – was later withdrawn to ensure adequate resource availability for the other two divisions.¹⁶⁶ That was a smart decision.

Withdrawing the 13th Airborne Division, along with tying in with adjacent units once the airborne divisions hit the ground, appreciably increased Ridgway’s operational reach and prevented culmination. For this jump, Ridgway ensured sufficient means were available. At 1000 hours on D-Day, 1,700 aircraft and 1,300 gliders delivered both airborne divisions of 14,000 troops.¹⁶⁷ The drop was complete within three hours and unlike the scattering of the airborne operations at Sicily and Normandy, the jump across the Rhine was so accurate that by nightfall, the XVIII Airborne Corps seized all but one objective including five intact bridges across the Issel River.¹⁶⁸ The first resupply mission was right there also. Two hundred, forty B-24 aircraft “dropped “five hundred and forty (540) tons of ammunition, food and gasoline at 1300 Hours.”¹⁶⁹ The aerial resupply mission for the next day was unnecessary and duly cancelled.¹⁷⁰

Contributing to the XVIII Airborne Corps’ operational reach, Ridgway visualized a combined arms offensive in phases. Ridgway arranged operations in a direct approach incorporating combined arms in a joint and multinational effort against the enemy defenses. The XVIII Airborne Corp conducted a daylight airborne strike, leveraging what Ridgway described as the “complete Allied air supremacy and the overwhelming superiority of available Allied artillery.”¹⁷¹ VARSITY opened with a heavy bombing of German Airports at D-3 and then the town of Wesel along with a massed artillery preparation at D-1 that lasted until P-hour on D-Day (the jump at 1000 hours). The continuous attack by medium bombers

¹⁶⁵ XVIII Corps (Airborne), “Summary of Ground Forces Participation in Operation VARSITY,” 1.

¹⁶⁶ Ibid.

¹⁶⁷ 21st Army Group, “Notes on the Operations of the 21st Army Group,” 47.

¹⁶⁸ XVIII Corps (Airborne), “Summary of Ground Forces Participation in Operation VARSITY,” 7.

¹⁶⁹ Ibid., 3.

¹⁷⁰ Ibid.

¹⁷¹ XVIII Corps (Airborne), “Report of Operation VARSITY,” 1.

was a decisive point in the first phase of operations. For the next phase on D-Day, the 1st British Commandos had “launched a sneak attack on Wesel,” and secured the western half of the town while ground forces assaulted across the Rhine north of Wesel and air transport assets supported the jump.¹⁷² After the jump, artillery provided close support to the troopers on the ground. Ridgway also planned objectives by phases with different lines seized by Corps elements by D+1, D+2, and D+3 and the XVIII Airborne Corps executed the plan with a tempo that secured all the corps objectives inside of six days. The lines of operation also included deepening the bridgehead by 10,000 to 15,000 yards (5.6 to 8.5 miles) and tying in with left, right and rearward ground units.¹⁷³ Ridgway’s combined arms effort enabled the XVIII Airborne Corps to achieve success across the Rhine ahead of schedule.

The tempo gained against the enemy was so effective, that the XVIII Airborne Corps “averaged a daily advance of over seven miles, took 8,000 prisoners, and destroyed the 84th Infantry Division.”¹⁷⁴ After six days, the XVIII Airborne Corps had advanced “forty-one miles.”¹⁷⁵ The XVIII Airborne Corps was ordered to exploit their successes eastward rapidly deepening the bridgehead and toward the areas of Dulmen and Haltern. Ridgway later reported in November 1945 that the key terrain of Dulmen and Haltern defiles east of the Rhine seized and held by the 17th Airborne Corps, were “decisive contributions to this operation and subsequent developments of both British and U.S. armor were able to debouch into the north German plain at full strength and momentum.”¹⁷⁶

The operation’s plan also considered simultaneity and depth. Unlike the disastrous airborne operations on Sicily that saw forces inserted incongruously in time, space and purpose, this attack was coordinated between divisions, between adjacent Corps, and between national elements. The British 1st Commando Brigade conducted the ground assault across the Rhine River and then became the XVIII Airborne Corps reserve after the airborne assault as each division cleared and secured its area. Two

¹⁷² XVIII Corps (Airborne), “Report of Operation VARSITY,” 1.

¹⁷³ Ibid., 2.

¹⁷⁴ Ibid.

¹⁷⁵ Ibid., 11.

¹⁷⁶ Ibid., 2.

airborne divisions enabled the “simultaneous parachute drops and glider landings in the area North of Wesel.”¹⁷⁷ ... The vertical envelopment in conjunction with the river crossing and seizure of the town of Wesel gave the operation considerable depth that overwhelmed the enemy.¹⁷⁸

Ridgway indicated that he, along with British Second Army, planned to delay operations “by as much as five days if weather should compel postponement of the airborne effort.”¹⁷⁹ Ridgway knew he needed to balance the risk of catastrophe associated with airdrops in bad weather, against the opportunities presented through the magnitude of such a detailed and coordinated joint and multinational effort. Fortunately, nothing prevented execution across the Rhine on 24 March 1945.

That execution, along with its prior planning, demonstrates how Ridgway’s operational art matured. Reflecting on the attack across the Rhine, Ridgway later wrote “throughout both planning and execution, the cooperation and actual assistance provided by the Commanders, Staff, and troops of the British formations under which this [XVIII Airborne] Corps served, which it commanded, to with which it was associated, left nothing to be desired.”¹⁸⁰ It is conceivable that operational art matured among all the joint and multinational partners in the allied war effort between 1943 and 1945.

CONCLUSION

General Matthew Ridgway’s visualization of operations matured based on his leader development, the lessons that he learned from failure and from personally mastering operational art. General Ridgway’s professional military education, as well as the doctrine of the era, prepared him for commanding a division and a corps. However, instead of linking the tactical level to the strategic level of war by integrating ways and means to accomplish the ends, as operational art suggested prior to WWII,

¹⁷⁷ XVIII Corps (Airborne), “Report of Operation VARSITY,” 7.

¹⁷⁸ Ibid., 3.

¹⁷⁹ Ibid.

¹⁸⁰ Ibid.

the education and doctrinal training Ridgway received merely reflected the principles of war for employing large formations consisting of combined arms maneuver in combat. It was not enough.

Ridgway learned the application of operational art experientially. In five evaluations of his first five combat operations, it was easy to recognize that Ridgway initially considered none of the eleven Army operational art elements and by the fifth operation, considered them all. These were costly lessons though.

The Maturation of General Ridgway's Operational Art -- Elements of Operational Art	HUSKY Sicily 82nd Div	NEPTUNE Normandy 82nd Div	MARKET Eindhoven XVIII Corps	The Bulge Ardennes XVIII Corps	VARSAW Rhine River XVIII Corps
Center of Gravity	NO	NO	NO	YES	YES
Culmination	NO	NO	YES	YES	YES
Decisive Points	NO	NO	YES	YES	YES
Direct / Indirect Approach	NO	NO	NO	YES	YES
Endstate and Conditions	NO	YES	YES	NO	YES
Lines of Operation /Effort	NO	NO	NO	NO	YES
Operational Reach	NO	NO	YES	YES	YES
Phasing and Transitions	NO	NO	NO	YES	YES
Simultaneity and Depth	NO	YES	YES	YES	YES
Risk	NO	YES	YES	YES	YES
Tempo	NO	NO	NO	YES	YES
ANALYSIS	0 / 11	3 / 11	6 / 11	9 / 11	11 / 11

Figure 3. Ridgway's Maturation of Operational Art (author created).

General Ridgway completed all the military education available in his era. However, it was only after the crucible of the experiences of three combat operations that he eventually applied operational art successfully and not until his fifth did he master operational art. Had he known how to apply operational art better at the first of his five combat operations in World War II, Operation HUSKY, then Ridgway might have avoided the deaths of hundreds of friendly and enemy soldiers as well as civilians. Ridgway

was just one of thirty-four corps commanders the U.S. Army had during WWII.¹⁸¹ Perhaps if the Army had taught every large unit commander operational art and their elements, as current doctrine prescribes these terms, then Allied forces could have ended the war sooner.

Implications

The U.S. Army cannot afford for operational level commanders to learn operational art on-the-job at the cost of Soldiers' lives the way that General Ridgway learned the application of operational art informed by visualization. The current operational art doctrine is valid and it is imperative that the U.S. Army teach operational art to field grade Army officers as part of professional military education in the Army learning institutions. Operational art applied through a systemic approach using the eleven elements of operational art is critical to an operational level commander's visualization in mission command. In academic year 2009-2010, Army officers received only eighteen hours of operational art instruction through Intermediate Level Education (ILE),¹⁸² which is the "Army's formal education program for majors," taught at the U.S. Army Command and General Staff College.¹⁸³ Since the Army War College presents a curriculum for senior lieutenant colonels that focuses at the strategic level of warfare, those eighteen hours taught to majors at ILE are most likely the only lessons on operational art an officer ever receives. That is unless that officer is one of approximately 126 officers selected annually for the highly competitive School of Advanced Military Studies (SAMS) at the U.S. Army Command and General Staff College. In the following academic year (2010-11), SAMS taught operational art through nineteen lessons

¹⁸¹ Robert H. Berlin, *U.S. Army World War II Corps Commanders: A Composite Biography* (Fort Leavenworth, KS: U.S. Army Command and General Staff College, Combat Studies Institute, 1989), 4.

¹⁸² Author's notes from personal attendance at Command and General Staff School, Academic Year 2009-10, U. S. Army Command and General Staff College, Fort Leavenworth, KS. Eighteen hours is based on six contact hours in the classroom with approximately two hours of required student preparation reading per contact hour.

¹⁸³ U.S. Army, Department of the Army Pamphlet (DA PAM) 600-3, *Commissioned Officer Professional Development and Career Management* (Washington, DC: Government Printing Office, 1 February 2010), 25.

totaling 200 hours.¹⁸⁴ Comparatively, operational art instruction received at ILE was only 9% of that received at SAMS.

Recommendations

There are four recommendations drawn from this investigation of General Ridgway's maturation of operational art. First, the most important recommendation is that the U.S. Army Command and General Staff College should increase emphasis on operational art. Second, those Army officers not selected for attendance at SAMS should conduct self-development by thoroughly reading doctrinal publications that include the topic of operational art such as Joint Publication 3-0, *Joint Operations*, as well as Army Field Manual 3-0 *Operations*. Additionally, there is a considerable amount of literature available related to operational art on hand at the U.S. Army Command and General Staff College's Combined Arms Research Library.¹⁸⁵ Third, the scope of this investigation did not expand beyond WWII. Similar evaluation of General Ridgway as an operational artist while commanding the Eighth U.S. Army in Korea in 1951, viewed through the lens of the operational art elements, would be very interesting. It might also prove very educational to senior Army leaders. Finally, this study considered the eleven U.S. Army elements of operational art, because General Ridgway served as an Army officer, and for the reason that Army organizations authored most of the primary source documents investigated. However, Department of Defense Joint doctrine lists seventeen elements of operational design in Joint Publication 3-0, *Joint Operations* that is a more comprehensive listing with exception to the element of risk.¹⁸⁶ Since current operations, and likely those in the future, are conducted jointly with sister services, further study of operational art should consider the expanded joint listing.

¹⁸⁴ Author's notes from personal attendance at the School of Advanced Military Studies (SAMS), Academic Year 2010-11, U.S. Army Command and General Staff College, Fort Leavenworth, KS. Two hundred hours is based on 19 lessons with 3.5 contact hours per lesson and two hours of required student preparation reading per contact hour.

¹⁸⁵ A catalogue search of all collections at the U.S. Army Command and General Staff College's Combined Arms Research Library for the term "Operational Art," returned 75 results on 21 February 2011.

¹⁸⁶ Department of Defense, Joint Publication (JP) 3-0, *Joint Operations*, 17 September 2006, Incorporating Change 2, 22 March 2010, IV-5 – IV-21. http://www.dtic.mil/doctrine/docnet/courses/operations/jfcon/jp3_0.pdf (accessed February 21, 2011).

APPENDICES

Appendix A: Key Terms and Definitions

Centers of Gravity: A center of gravity is the source of power that provides moral or physical strength, freedom of action, or will to act.¹⁸⁷

Culmination: The culminating point is that point in time and space at which a force no longer possesses the capability to continue its current form of operations.¹⁸⁸

Decisive Points: A decisive point is a geographic place, specific key event, critical factor, or function that, when acted upon, allows commanders to gain a marked advantage over an adversary or contribute materially to achieving success.¹⁸⁹

End State and Conditions: The end state is a desired future condition represented by the expressed conditions that the commander wants to exist when an operation ends.¹⁹⁰

Lines of Operation/Effort: In an operational design, lines of operations and lines of effort bridge the broad concept of operations across to discreet tactical tasks. They link tactical and operational objectives to the end state.¹⁹¹

Direct or Indirect Approach: The *approach* is the manner in which a commander contends with a center of gravity. The *direct approach* is the manner in which a commander attacks the enemy's center of gravity or principal strength by applying combat power directly against it. The *indirect approach* is the manner in which a commander attacks the enemy's center of gravity by applying combat power against a series of decisive points while avoiding enemy strength.¹⁹²

Operational Reach: Operational reach is the distance and duration across which a unit can successfully employ military capabilities.¹⁹³

Phasing and Transitions: A phase is a planning and execution tool used to divide an operation in duration or activity. A change in phase usually involves a change of mission, task organization, or rules of engagement. Phasing helps in planning and controlling and may be indicated by time, distance, terrain, or an event.¹⁹⁴

Risk: Operational art balances risk and opportunity to create and maintain the conditions necessary to seize, retain, and exploit the initiative and achieve decisive results.¹⁹⁵

¹⁸⁷ U.S. Army. *Field Manual (FM) 3-0, Operations 2008, Change No. 1*. (Washington, DC: U.S. Government Printing Office, 22 February 2011), 7-30. These eleven key terms are elements of operational art.

¹⁸⁸ Ibid., 7-85.

¹⁸⁹ Ibid., 7-48.

¹⁹⁰ Ibid., 7-27.

¹⁹¹ Ibid., 7-52.

¹⁹² Ibid., 7-33.

¹⁹³ Ibid., 7-65.

¹⁹⁴ Ibid., 7-79.

¹⁹⁵ Ibid., 7-91.

Simultaneity and Depth: Simultaneity and depth extend operations in time and space. Simultaneity has two components. Both depend on depth to attain lasting effects and maximum synergy. Simultaneous combinations of offensive, defensive, and stability tasks overwhelm enemy forces and their will to resist while setting the conditions for a lasting, stable peace.¹⁹⁶

Tempo: Tempo is the relative speed and rhythm of military operations over time with respect to the enemy.¹⁹⁷

¹⁹⁶ Ibid., 7-74.

¹⁹⁷ Ibid., 7-71.

Appendix B: Matthew B. Ridgway Biographical Timeline¹⁹⁸

- March 3, 1895 – Born, Ft Monroe, Virginia
- 1912 – Graduated from High School in Boston
- 1913 – Entered the United States Military Academy at West Point
- April 1917 – Graduated from West Point
- 1917-18 – Commanded an Infantry company at Eagle Pass, Texas
- September 1918 – Returned to West Point; served as instructor in Spanish, later athletics director
- June 1925 – Completed the Company Commander's course at the Infantry School at Fort Benning, Georgia; company command in the 15th Infantry in Tsientsin, China
- 1927 – Served as a Member of a U.S. mission to Nicaragua
- June 1930 – Completed the Infantry Advanced Course at Fort Benning, Georgia
- 1930 – Served as a military adviser to Theodore Roosevelt, Jr., then-Governor General of Philippines
- June 1935 – Graduated from Army's two-year Command and General Staff School at Fort Leavenworth, Kansas
- 1935-1936 – Served as Assistant Chief of Staff (G-3), Operations and Training, Second Army
- June 1937 – Graduated from the Army War College, Washington, DC
- 1937-1939 – Served as Assistant Chief of Staff (G-3), Operations and Training, Fourth Army
- September 1939 – Assigned to the War Plans Division of the War Department's General Staff in Washington, DC
- August 1942 – Promoted to Brigadier General; Commander of newly activated 82nd Infantry Division
- July 10, 1943 – The Army's first major nighttime combat jump, during invasion into Sicily
- June 6, 1944 – Combat jump into Normandy before D-Day
- August 1944 – Assigned command of the new XVIII Airborne Corps, led combat operations near Eindhoven, the Netherlands, in the Ardennes, and along the Rhine River
- Early 1946 – Served as General Eisenhower's military adviser to the U.S. Delegation to the United Nations; helped draft plans for an international United Nations force in Korea
- Late 1940's – Served as Commander of U.S. forces in Caribbean
- December 1950 – Promoted to Lieutenant General; assigned as Army Deputy Chief of Staff (G1); reassigned to command Eighth U.S. Army in Korea
- April 11, 1951 – President Truman fired General of the Army MacArthur; named Ridgway to succeed him; Replaced MacArthur as commander of United Nations forces in Korea and of allied occupying forces in Japan

¹⁹⁸ For more details see the Arlington National Cemetery Website.
<http://www.arlingtoncemetery.net/ridgway.htm> (accessed August 12, 2010).

- June 1952 – Succeeded General of the Army Dwight D. Eisenhower as Supreme Commander of Allied Forces in Europe
- July 27, 1953 – Chinese and North Koreans signed an armistice with United Nations and South Korean forces
- 1953 – 1955 – Served as Army Chief of Staff
- June 1955 – Retired
- 26 July 1993 – Died aged 98, Fox Chapel, Pennsylvania

Appendix C: Operational Art in Theory

During General Matthew B. Ridgway's formative military years, the concept of operational art existed and he could have learned it earlier by studying theory. The origin of the operational art in U.S. Army doctrine is evident in the American Civil War. By studying Napoleonic Warfare through the writings of the two most prominent theorists of the time, Carl von Clausewitz and Baron de Jomini, Federal generals Ulysses S. Grant and William T. Sherman practiced operational art. According to military theorist James J. Schneider, who concluded that the 1864 American Civil War campaigns of Grant and Sherman into the southern states were indeed operational art, the application was "a unique style of military art [that] became the planning, execution and sustainment of temporally and spatially distributed maneuvers and battles, all viewed as one organic whole."¹⁹⁹ The "organic whole" in this conclusion closely resembles the modern doctrinal definition of a campaign.²⁰⁰ After the American Civil War campaigns, the operational art concept further developed into the 1920s through the work of German theorist Colmar von der Goltz and then, and more significantly, by Soviet theorists such as Mikhail Tukhachevsky and Aleksandr A. Svechin.²⁰¹

Not only did the Soviets refine the concept, but also they created the term *operational art* as the U.S. Army recognizes it today. In 1927, Svechin published a book titled *Strategy* in which he divided the art of war into three levels: tactics, operational art, and strategy.²⁰² Svechin saw tactics simply as "battle requirements" and the corresponding art of tactics as "adapting equipment to battle conditions."²⁰³ Svechin saw strategy as "the art of combining preparations for war and the grouping of operations for

¹⁹⁹ James J. Schneider, "Vulcan's Anvil: The American Civil War and the Foundations of Operational Art," Theoretical Paper No. Four (Fort Leavenworth, KS: Presidio Press, 1992), 28.

²⁰⁰ "A series of related major operations aimed at achieving strategic and operational objectives within a given time and space." As defined by Department of Defense, Joint Publication (JP) 1-02, *Department of Defense Dictionary of Military and Associated Terms*, 12 April 2001, As Amended Through 19 August 2009 (Washington, DC: Government Printing Office, 2009), 76.

²⁰¹ Justin Kelly and Michael Brennan, "The Leavenworth Heresy and the Perversion of Operational Art," *Joint Force Quarterly*, Issue 56 (January 2010), 111,

²⁰² Aleksandr A. Svechin, edited by Lee, Kent D., *Strategy*, A translation of: *Strategiia*. Moscow: Voennyl vestnik, 1927 (East View Publications: Minneapolis, MN, 1991), 68-69.

²⁰³ *Ibid.*, 68.

achieving the goal set by the war for the armed forces.”²⁰⁴ In between these two levels, Svechin suggested that there was operational art that governed “tactical creativity,” as a “path to the ultimate goal broken down into a series of operations.”²⁰⁵ There was much more to warfare than just fighting battles. Warfare now included the purposeful arrangement of operations in a series to accomplish political aims. Svechin went on to describe the context of operations in detail:

An operation is a conglomerate of quite different actions: namely, drawing up the plan of the operation; logistical preparations; concentrating one’s forces at the starting position; building defensive fortifications; marching; fighting battles which lead to the encirclement or destruction of a portion of the hostile forces and the forced withdrawal of other hostile forces, either as a result of a direct envelopment or as a result of a preliminary breakthrough, and to the capture or holding of a certain line or geographical area. Tactics and administration are the material of operational art and the success of the development of an operation depends on both the successful solution of individual tactical problems by the forces and the provision of all the material they need to conduct an operation without interruption until the ultimate goal is achieved. On the basis of the goal of an operation, operational art sets forth a whole series of tactical missions and a number of logistical requirements.²⁰⁶

Svechin published several major analytical military theory manuscripts between 1923 and 1937 including *History of Military Art*, *Evolution of Military Art*, *Strategy*, *Clausewitz*, and *Strategy of the 20th Century at the First Stage*.²⁰⁷ In the early 20th Century, Aleksandr Svechin stood as the prominent military theorist. Not only did he suggest there was an operational level of warfare – a concept well recognized in current U.S. Doctrine – but also he provided a useful definition of operational art. Svechin defined operational art as, “Totality of maneuvers and battles in a given part of a theater of military action directed toward the achievement of the common goal, set as final in the given period of the campaign.”²⁰⁸

²⁰⁴ Svechin, *Strategy*, 69.

²⁰⁵ Ibid.

²⁰⁶ Ibid.

²⁰⁷ Ibid., 2.

²⁰⁸ Aleksandr A. Svechin, ed., *Strategiya v trudakh voennykh klassikov*, 2 vols. (Moscow: n.p., 1924–1926), II: 102–04, as cited in Jacob W. Kipp, “The Origins of Soviet Operational Art 1917-1936,” Michael D. Krause and R. Cody Phillips, general editors, *Historical Perspectives of the Operational Art* (Washington, DC: U.S. Army Center of Military History, 2005), 230.

Three early twentieth century Russian wars fostered the genesis of operational art. Svechin published operational art theory eight years before Matthew Ridgway graduated from the U.S. Army Command and General Staff School, and that publication was a decade before Ridgway graduated from the Army War College. The operational art concept existed sixteen years before Ridgway entered combat in WWII as a division commander. Yet, Ridgway did not incorporate operational art into an intermediate level of warfare. Nor did the U.S. Army incorporate operational art in doctrine for another fifty years.

Appendix D: Operational Art in Doctrine

Perhaps prompted by attempts to learn more from the Russian ways of war during the Cold War, Field Manual (FM) 100-5 introduced the term ‘operational art’ into U.S. Army doctrine in 1986.²⁰⁹ During General Matthew Ridgway’s time, the Army capstone document was the 1941 version of FM 100-5, the *Army Field Service Regulations, Operations* which mentioned nothing about linking the tactical level to the strategic level of war by integrating ways and means to accomplish the ends, as Russian operational art theory suggested prior to WWII.²¹⁰ However, the manual discussed a doctrine centered on principles of war such as objective, unity of effort, surprise, and concentration. Another U.S. Army publication that was closer to operational art was a Command and General Staff School (CGSS) manual provided to students titled *Tactical and Strategical Studies, Corps and Army* published in 1922. CGSS students received hypothetical Corps and Army “situations, solutions, decisions and orders.”²¹¹ The purpose was to teach the “principles applicable to larger combat units, to illustrate their application by solutions of concrete problems, and to study decisions of higher commanders, the mechanism of the tactical handling of larger units, and the technique of preparing and promulgating army and corps combat orders.”²¹² The Army possessed a capability for its officers to visualize campaigns and apply operational art as the U.S. Army entered WWII but did not clearly define the concept.

The importance of visualization is that it enables operational commanders to formulate how, or the ways, to integrate available forces, or the means, to achieve strategic objectives, or the ends, so that the commander can then describe and direct a concept of operations. FM 3-0 defines commander’s visualization as, “the mental process of developing situational understanding, determining a desired end

²⁰⁹ “Operational art is the employment of military forces to attain strategic goals in a theater of war or theater of operations through the design, organization, and conduct of campaigns and major operations.” U.S. Army, Field Manual (FM) 100-5, *Operations*, 1986. (Washington, DC: U.S. Government Printing Office, 5 May 1986), 10.

²¹⁰ War Department, Field Manual (FM) 100-5, *Field Service Regulations, Operations* (Washington, DC: U.S. Government Printing Office, 22 May 1941).

²¹¹ U.S. Army, *Tactical and Strategical Studies, Corps, and Army* (Fort Leavenworth, KS: General Service School Press, 1922), iii.

²¹² Ibid.

state, and envisioning the broad sequence of events by which the force will achieve that end state.”²¹³ The key words of this definition relevant to operational art are “the broad sequence of events.”

²¹³ U.S. Army, FM 3-0, *Operations 2008*, 5-25.

BIBLIOGRAPHY

Primary Sources

- 21st Army Group. "Notes on the Operations of the 21st Army Group, 6 June 1944 - 5 May 1945," Digital Collections, World War II Operational Documents; Combined Arms Research Library; U.S. Army Command and General Staff College, Fort Leavenworth, KS.
- 75th Infantry Division. "The 75th Infantry Division in combat: the Battle in the Ardennes, 23 Dec. 1944-27 Jan. 1945: the Colmar Pocket Battle, 30 Jan. 1945-9 Feb. 1945: the Battle for the Ruhr, 31 Mar. 1945-15 Apr. 1945." Digital Collections, World War II Operational Documents; Combined Arms Research Library; U.S. Army Command and General Staff College, Fort Leavenworth, KS.
- 82d Airborne Division. "82d Airborne Division in Sicily and Italy," Report of Operations, Preface signed by T. B. Ketterson, Division Historian, [n.p.] 1945; Box 6; 82d Airborne Division Documents; Pre. Acc. Collection; Dwight D. Eisenhower Library, Abilene, KS.
- 82d Airborne Division. "82d Airborne Division – Operation NEPTUNE," signed by Matthew B. Ridgway, 25 July 1944; Digital Collections, World War II Operational Documents; Combined Arms Research Library; U.S. Army Command and General Staff College, Fort Leavenworth, KS.
- 82d Airborne Division. Administrative Order No. 1 to Accompany Field Order No. 6, 12 May 1944; Digital Collections, World War II Operational Documents; Combined Arms Research Library; U.S. Army Command and General Staff College, Fort Leavenworth, KS.
- 82nd Airborne Division. "Field Order No. 11" 13 September 1944; Digital Collections, World War II Operational Documents; Combined Arms Research Library; U.S. Army Command and General Staff College, Fort Leavenworth, KS.
- 82d Airborne Division. Report of Normandy Operations, signed by Matthew B. Ridgway, 10 July 1944; Box 98; Crusade in Europe Documents; Eisenhower, Dwight D.: Papers, Pre-Presidential, 1916-1952; Dwight D. Eisenhower Library, Abilene, KS.
- 82nd Airborne Division. Report of Operations, "Operation Neptune" at Normandy, June 6 - July 8, 1944; U.S. Army Unit Records, Box 1, 82nd Airborne Division in Normandy France-Operation Neptune; Dwight D. Eisenhower Library, Abilene, KS.
- 82d Airborne Division. Report of Operation NEPTUNE, no date; Digital Collections, World War II Operational Documents; Combined Arms Research Library; U.S. Army Command and General Staff College, Fort Leavenworth, KS.
- XVIII Corps (Airborne). *Mission Accomplished, A Summary of Military Operations of The XVIII Corps (Airborne) in the European Theater of Operations, 1944-1945*. Schwerin, Germany: Published by the XVIII Corps (Airborne), 11 September 1945.
- XVIII Corps (Airborne). "Operation MARKET, Airborne Phase, D to D Plus Ten, Inclusive," signed by M. B. Ridgway, 04 December 1944; Digital Collections, World War II Operational Documents; Combined Arms Research Library; U.S. Army Command and General Staff College, Fort Leavenworth, KS.
- XVIII Corps (Airborne). "Operation Report Ardennes, 19 December 1944 to 13 February 1945," signed by M. B. Ridgway, 1 March 1945; Digital Collections, World War II Operational Documents; Combined Arms Research Library; U.S. Army Command and General Staff College, Fort Leavenworth, KS.

- XVIII Corps (Airborne). "Report on Operation VARSITY," signed by Matthew B. Ridgway, 25 April 1945, Digital Collections, World War II Operational Documents; Combined Arms Research Library; U.S. Army Command and General Staff College, Fort Leavenworth, KS., Sketch No 1.
- XVIII Corps (Airborne). "Summary of Ground Forces Participation in Operation VARSITY," signed by Matthew B. Ridgway, 25 April 1945, Digital Collections, World War II Operational Documents; Combined Arms Research Library; U.S. Army Command and General Staff College, Fort Leavenworth, KS.
- XVIII Corps (Airborne). "Summary of Operations 18 December 1944 to 13 February 1945," signed by M. B. Ridgway, 1 March 1945; Digital Collections, World War II Operational Documents; Combined Arms Research Library; U.S. Army Command and General Staff College, Fort Leavenworth, KS.
- Arnold, H. H. Arnold memorandum to Commanding General, Command and General Staff School, 4 November 1945; Digital Collections, World War II Operational Documents; Combined Arms Research Library; U.S. Army Command and General Staff College, Fort Leavenworth, KS.
- Department of the Army. Field Manual (FM) 3-0, *Operations*, 2008, with Change No. 1. Washington, DC: U.S. Government Printing Office, 22 February 2011.
- Department of the Army. FM 100-5, *Operations*, 1986. Washington, DC: U.S. Government Printing Office, 5 May 1986.
- Department of the Army. Department of the Army Pamphlet (DA PAM) 600-3, *Commissioned Officer Professional Development and Career Management*. Washington, DC: Government Printing Office, 1 February 2010.
- Department of Defense. Joint Publication (JP) 1-02, *Department of Defense Dictionary of Military and Associated Terms*, 12 April 2001, (As Amended Through 19 August 2009). http://www.dtic.mil/doctrine/dod_dictionary/ (accessed December 28, 2011)
- Department of Defense. JP 3-0, *Joint Operations*, 17 September 2006, Incorporating Change 2, 22 March 2010. http://www.dtic.mil/doctrine/docnet/courses/operations/jfcon/jp3_0.pdf (accessed February 21, 2011).
- First Allied Airborne Army. "Narrative of Operations in Holland," signed by Robert C. Angell, Unit Historian, 9 October 1944; Digital Collections, World War II Operational Documents; Combined Arms Research Library; U.S. Army Command and General Staff College, Fort Leavenworth, KS.
- Eisenhower, Dwight D. Eisenhower letter to George C. Marshall, 01 February 1945; Box 137; Crusade in Europe Documents; Eisenhower, Dwight D.: Papers, Pre-Presidential, 1916-1952; Dwight D. Eisenhower Library, Abilene, KS.
- Hasbrouck, Robert W. Hasbrouck letter to Matthew Ridgway, 22 December 1944, XVIII (Airborne) Corps headquarters diary, Ridgway papers, Military History Institute, as cited in Harold R. Winton, *Corps Commanders of the Bulge: Six American Generals and Victory in the Ardennes* (Modern War Studies). Lawrence, Kansas: University Press of Kansas, 2007.
- Heintzelman, S., MG, USA. *Annual Report for the Command and General Staff School Year 1933-1934*. Fort Leavenworth, KS: Command and General Staff School Press, 1934.
- Ridgway, Matthew B. *The Korean War*. New York, NY: Da Capo Press, 1986.
- Ridgway, Matthew B. as told to Harold H. Martin. *Soldier: The Memoirs of Matthew B. General Ridgway*. New York, NY: Harper, 1956.
- Supreme Headquarters Allied Expeditionary Force. "Operation OVERLORD," order stamped "BIGOT," signed by W. B. Smith, 10 March, 1944; Digital Collections, World War II Operational

- Documents; Combined Arms Research Library; U.S. Army Command and General Staff College, Fort Leavenworth, KS.
- Truman, Harry S. *Public Papers of the Presidents of the United States: Harry S. Truman, 1951*. Washington, DC: U.S. Government Printing Office, 1965.
[http://www.trumanlibrary.org/publicpapers/index.php?pid=289&st=General Ridgway &st1=](http://www.trumanlibrary.org/publicpapers/index.php?pid=289&st=General+Ridgway+&st1=)
 (accessed January 23, 2011).
- United States Army. *Tactical and Strategical Studies, Corps, and Army*. Ft. Leavenworth, KS: General Service School Press, 1922.
- United States Army Command and General Staff College Library. *A Military History of the US Army Command and General Staff College, 1881-1963*. No author named, Fort Leavenworth, KS: U.S. Army Command and General Staff College Press, 1964.
- War Department. *Annual Report of the Secretary of War, Fiscal Year Ended June 30, 1920*, Washington, DC: Government Printing Office, 1920.
- War Department. *Field Services Regulations United States Army 1923*. Washington, November 2, 1923.
- War Department. General Orders No. 115, *Regulations Governing the System of Military Education in the Army, June 27, 1904*, Washington, DC: Government Printing Office, 1904.
- War Department. FM 100-5, *Field Service Regulations, Operations*, Washington, DC: U.S. Government Printing Office, 22 May 1941.
- War Department. FM 100-15, *Field Service Regulations, Larger Units*, Washington, DC: Government Printing Office, 1950.

Secondary Sources

- Albert N. Garland et al. *Sicily and the Surrender of Italy*. Washington, DC: Government Printing Office, 1965.
- Arlington National Cemetery Website. "Matthew Bunker Ridgway, General, United States Army," From a Contemporary Press Report March 1993. <http://www.arlingtoncemetery.net/ridgway.htm>
 (Accessed August 12, 2010).
- Ball, Harry P. *Of Responsible Command, A History of the U.S. Army War College*. Carlisle Barracks, PA: Alumni Association of the U.S. Army War College, 1983.
- Bell, William Gardner. *Commanding Generals and Chiefs of Staff, 1775-1982*. Washington, DC: United States Army, Center of Military History, 1983.
- Robert H. Berlin. *U.S. Army World War II Corps Commanders: A Composite Biography*. Fort Leavenworth, KS: U.S. Army Command and General Staff College, Combat Studies Institute, 1989.
- Blair, Clay. *Ridgway's Paratroopers: The American Airborne in World War II*. Garden City, N.Y.: Dial Press, 1985.
- Burns, Jr., Julian H. *The Education of Matthew Ridgway in Generalship*. Unpublished manuscript, U.S. Army War College, Carlisle Barracks, PA, 1989.
- Cockrell, Phillip Carlton. "Brown Shoes and Mortar Boards: US Army Officer Professional Education at the Command and General Staff School at Fort Leavenworth, Kansas, 1919-1940." PhD diss., University of South Carolina, 1991.

- Crackel, Theodore J. *West Point: A Bicentennial History*. Lawrence, KS: University Press of Kansas, 2002.
- D'Este, Carlo. *Bitter Victory, The Battle For Sicily, 1943*. New York, NY: E.P. Dutton, 1988.
- Gole, Henry G. *The Road To Rainbow: Army Planning For Global War, 1934-1940*. Annapolis, Maryland: Naval Institute Press, 2003.
- Kelly, Justin and Michael Brennan. "The Leavenworth Heresy and the Perversion of Operational Art," *Joint Force Quarterly, Issue 56*, January 2010.
- Kipp, Jacob W. "The Origins of Soviet Operational Art 1917-1936," in *Historical Perspectives of the Operational Art*, ed. Michael D. Krause and R. Cody Phillips, Washington, DC: U.S. Army Center of Military History, 2005.
- Marshall, George C. *The Papers of George Catlett Marshall*. ed. Bland, Larry I. and Sharon Ritenour Stevens. Lexington, VA: The George C. Marshall Foundation, 1981.
- Matheny, Michael R. "The Development of the Theory and Doctrine of Operational Art in the American Army, 1920-1940," Monograph, School of Advanced Military Studies, U.S. Army Command and General Staff College, Fort Leavenworth, KS, 22 March 1988.
- Mitchell, George Charles. *Matthew B. Ridgway: Soldier, Statesman, Scholar, Citizen*. Mechanicsburg, PA: Stackpole Books, 2002.
- Nenninger, Timothy K. "Leavenworth and Its Critics: The U.S. Army Command and Staff School, 1920-1940," *The Journal of Military History*, Vol. 58, No. 2, April 1994.
- Schifferle, Peter J. "America's School for War: Fort Leavenworth, Officer Education, and Victory in World War II" lecture, meeting of the Fort Leavenworth Historical Society, Frontier Army Museum, Fort Leavenworth, KS, 18 November 2010.
- Schifferle, Peter J. *America's School for War: Fort Leavenworth, Officer Education, and Victory in World War II* (Modern War Studies). Lawrence, KS: University Press of Kansas, 2010.
- Schneider, James J. "Vulcan's Anvil: The American Civil War and the Foundations of Operational Art," Theoretical Paper No. Four, Fort Leavenworth, KS: Presidio Press, 16 June 1992.
- Smith, Walter Bedell. *Eisenhower's Six Great Decisions, Europe 1944-1945*, New York, NY: Longmans, Green and Co., 1956.
- Svechin, Aleksandr A. *Strategy* (A translation of: Strategiia. Moscow: Voennyl vestnik, 1927), edited by Lee, Kent D., East View Publications: Minneapolis, MN, 1991.
- Wade, Gary, Lieutenant Colonel, U.S. Army. "World War II Division Commanders," *CSI Report No. 7*. Fort Leavenworth, KS: Combat Studies Institute.
- Webb, William J. "The Root Reforms and Army Schools and Branches." Carlisle Barracks, PA: U.S. Army Center for Military History, 31 May 2001.
<http://www.history.army.mil/documents/1901/Root-Schools.htm> (accessed 3 JAN 11).
- Winton, Harold R. *Corps Commanders of the Bulge: Six American Generals and Victory in the Ardennes* (Modern War Studies). Lawrence, Kansas: University Press of Kansas, 2007.